

## Detroit Deaths May Mean Outlawing of Multiple Systems

(Concluded from Page 1, Column 4) that the deaths were caused by the methyl chloride gas. There were evidences that the couple had been ill and vomiting before they died, and the bed on which Mr. Koss had died was covered with spots of a green substance.

### CAUSE NOT POSITIVE

Dr. Love stated in an interview with a REFRIGERATION NEWS representative that nothing had showed up in the autopsy that would definitely prove that the deaths were caused by methyl chloride gas, but he pointed out that in such cases there were generally no findings that could be called "characteristic" as relating to methyl chloride poisoning.

He stated that while the condition of some of the organs was such as would likely be found in cases where it was definitely known that methyl chloride was the lethal agent, that these conditions could also be found where other agents had caused death.

### LEAK IN VALVE

Leo Gage, refrigeration inspector for the City of Detroit Department of Safety Engineering, examined the system Monday and told the REFRIGERATION NEWS representative that there was a leak through the shut-off valve in a junction box located on the ceiling of the apartment in which the couple were found dead.

The valve, of the sylphon packless type, was fitted into a three-way joint where suction risers serving two sets of evaporators join the main suction line which returns the refrigerant to the 1-hp. water-cooled condensing unit.

The valve is thought to be part of the original installation, which was made in 1930.

### CORONER DISPUTED

A statement by Deputy Coroner Ling that "we found the refrigerator in this apartment working imperfectly all last week, the water did not freeze and there was a drip in the pipe," was refuted by J. A. McCaffery, independent service man who had been servicing the system for the last two years.

Mr. McCaffery told the REFRIGERATION NEWS representative that about five weeks ago he found that some of the thermostatic expansion valves in the refrigerators (one in each apartment) were sticking, and he diagnosed that there was moisture in the system. He purged the system to remove the moisture, and put in a new 23-lb. charge of methyl chloride. He did not use a warning agent.

Then last Wednesday, Sept. 15, he was called to service a refrigerator in one of the apartments that was on the suction riser leading to the junction box where the leak occurred. He found that there was a frost back on the individual suction line leading from the cabinet, and found that this had been caused by the thermostatic expansion valve having stuck open.

### JOINTS SOUND

Mr. McCaffery also declared that he had tested the joints and valve in the junction box for leaks at that time.

The tests made by Mr. Gage of the Department of Safety Engineering showed that the leak was definitely in the service valve, and not in the joints. In addition to a test by a torch, oil carried through the system was found leaking off the valve cap.

Mr. Gage believes that either moisture in the system or the frostback on the suction line may have been contributing factors to the defection of the valve. He removed the valve from the junction box today and is planning to cut it apart and inspect it later this week.

### MULTIPLE SYSTEMS ATTACKED

"All the trouble comes from multiple installations," Halstead H. Mills, safety engineer for the Department of Building and Safety Engineering, said today in a statement published in The Detroit News. In a number of cases, these multiple systems are being supplanted by individual units and within a few years, multiple systems will be nonexistent in Detroit.

"However, while the multiple systems are potential hazards, I can recall only three deaths from poisonous fumes from refrigeration systems in a 12-year period, not including these last two cases. It would appear that there are greater hazards, such as driving an automobile, for instance."

Mills said that under the provisions of a City ordinance, all refrigerators are carefully inspected by the City when installed and a number of provisions intended as a protection to the public must be observed. It is impossible, he pointed out, for the City to maintain a constant check after the installations are made.

Investigation by representatives of AIR CONDITIONING AND REFRIGERATION NEWS revealed that the circumstances in the case were very similar to those in the death of a family of three in a Chicago apartment in 1929, which brought about an extended investigation and many hearings, all of which were reported in detail in issues of REFRIGERATION NEWS at that time.

## Speakers Announced For Two Porcelain Enamel Meetings

CHICAGO—Speakers at the Porcelain Enamel Institute's seventh annual meeting, to be held here Oct. 11-12, and at the second annual forum to be held at Ohio State university Oct. 13, 14, and 15, have been announced by the Institute's executive committee.

At the Institute meeting, speakers will include: R. G. Calton, Tennessee Enamel Mfg. Co., Institute president; E. L. Lasier, Titanium Alloy Mfg. Co.; F. E. Hodek, Jr., General Porcelain Enameling & Mfg. Co., and William Hogenson, Chicago Vitreous Enamel Product Co.

In addition, the following section chairmen will present their 1938 plans: H. D. Chase, Chicago Vitreous Enamel Product Co., chairman of the advertising and sales promotion section; Earle S. Smith, Toledo

Porcelain Enamel Products Co., chairman of the industry, trade and consumer contact section; George S. Blome, Baltimore Enamel & Novelty Co., chairman market research section.

Herman L. Cook, Norge Corp., chairman, production control section; and R. H. Turk, Porcelain Enamel & Mfg. Co., chairman of the technical research section.

First on the two-day convention calendar will be the Educational Bureau's meeting on the morning of Oct. 11. Various division meetings will be held in the afternoon.

At the annual meeting proper, Oct. 12, the board of trustees, members of the executive committee and officers will be elected.

Those attending the Institute meeting will have time to get to Columbus before the forum program begins. Majority of the speakers selected to participate on the forum program have already accepted, according to F. E. Hodek, Jr., of the General Porcelain Enameling & Mfg. Co., who is chairman of the forum committee.

## Air Distribution Layout For Use in Domestic Heating System

(Concluded from Page 19, Column 5) of outside air may be drawn in through the unit, provided that the amount introduced does not exceed natural infiltration. In this case, natural infiltration may be ignored as it will be practically eliminated by the slight pressure maintained by the mechanical forcing of outside air into the conditioned space.

In cases where room units are used, the air circulation will be ample for good distribution without further attention. However, in cases where duct type units are used, a duct system must be provided for distribution of the air which is circulated. It is important that this system be designed for economy of materials and for quiet operation.

Supply grilles sized from Table 32 and ducts sized according to Table 28 will tend to produce satisfactory results.

# COMING A REFRIGERATOR ANNOUNCEMENT BY STEWART-WARNER

The new 1938 Stewart-Warner Refrigerators will include the most daring idea in years—a feature so sensational that only Stewart-Warner would have courage to introduce it! And best of all—this new 1938 line is *in production right now!* We don't have to hold back. Neither we nor our dealers have any inventory problem. The 1938 Stewart-Warners will be ready *well in advance* of the holiday season!

## WATCH FOR FURTHER DETAILS!



# REFRIGERATION NEWS

Trade Mark Registered U. S. Patent Office. Established 1926 as Electric Refrigeration News  
Member Audit Bureau of Circulations. Member Associated Business Papers.

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TWENTY CENTS PER COPY

## G-E Clinic to Be Held at Nela Park Nov. 8-9

**Carl J. Ballus to Be In Charge of Dept. & Furniture Store Sales**

CLEVELAND—Details of General Electric Co.'s sixth annual merchandising clinic on electric home appliances, to be held at Nela Park here Nov. 8 and 9, are now being arranged by A. M. Sweeney, refrigeration sales manager; A. L. Pierce of G-E's merchandising division; and Carl J. Ballus, in charge of department and furniture store activities for the company's specialty appliance sales division.

More than 200 top executives of furniture and department stores in various sections of the country are expected to attend the two-day meeting.

First day of the clinic will be devoted to presentation of new products, including household and commercial refrigeration, ranges, laundry and cleaning equipment, (Concluded on Page 20, Column 3)

## Air Conditioner Goes To Bermuda by Plane

NEW YORK CITY—Pan American Airlines was used to transport a portable summer air-conditioning unit from New York to Bermuda when Richard F. Roper, son of the Secretary of Commerce and president of Pleasantaire Corp. left here Sept. 24 to deliver the unit personally.

Claimed to be the first time that a complete air-conditioning unit has been flown from New York to Bermuda, the trip marks the second time that an air-conditioning unit has been flown anywhere. First trip in which such equipment was delivered by air occurred several months ago, when a Pleasantaire unit was flown from Washington, D. C., to St. Louis. The unit weighs 140 lbs.

## 'First Auto Air Conditioned for Winter Driving' To Be Previewed Monday by Nash Dealers

CHICAGO—Behind closed doors and carefully shielded from public gaze, the first automobiles in history using conditioned air systems for winter driving will be previewed here Monday, Oct. 4, by the men who will present them to America—the Nash Motors dealers.

This was learned this week when officials of the Nash Motors division of Nash-Kelvinator Corp., headed by Charles W. Nash, chairman of the board, completed plans for their annual distributor convention, which begins here Monday.

Officials of the company declined to reveal the workings of the new conditioned air system, which, they declared, represents the first appli-

## Long Discount, Big Sales Commission Is Bendix Plan

SOUTH BEND, Ind.—Breaks for "the forgotten man"—the specialty salesman—as well as the distributor and dealer, are the basis of the merchandising policy for the new Bendix Home Laundry.

Distributors and dealers are granted discounts as good (or better) as those offered normally on electric refrigerators. In addition to a very high graduated scale of discounts, dealers get a \$10 trade-in allowance from the factory. And the retail salesman, it is recommended, should receive 15% commission.

These are said to be the longest discounts in the washing machine business today. In addition, the line will be backed by a heavy advertising schedule placed in newspapers and magazines, the latter headed by Saturday Evening Post and Good Housekeeping.

Representatives of the 70 distributorships who gathered in South Bend last week to hear the Bendix merchandising program explained comprised a list of names drawn from an unofficial Blue Book, or Social Register, of the household refrigeration industry.

Practically every distributor who came to the convention turned out to be one of the leading refrigeration merchandisers in his territory.

Not only has Vice President Judson Sayre and his assistants—who (Concluded on Page 3, Column 1)

## Household Sales Increase 21.2% in Cleveland Area

CLEVELAND—Sales of household electric refrigerators in Cleveland and Cuyahoga county for the first eight months of this year were 21.2% higher than those for the same period during 1936, according to reports made by distributors to the Electrical League.

August sales were 61.1% greater than those for the same month in 1936.

## 6 Mos. Survey Shows Gains in Air Cooling Jobs

**Reports on Installations By 50 Utilities Show Consistent Increases**

DETROIT—Sweeping gains in nearly every territory reporting are shown in the surveys of air-conditioning installations made during the first six months of this year in nearly 50 metropolitan areas and populations centers, which surveys are published on pages 12, 13, 14, 15, 16, 17, 18, and 19 of this issue.

The data on the installation of air-conditioning equipment was obtained through the operating power companies serving the various territories.

Substantial gains in the number of installations made for the first six months of this year as compared (Concluded on Page 12, Column 3)

## Workers Fight Way Through Picket Lines; Open Mueller Plant

PORT HURON, Mich., Sept. 28—Mueller Brass Co.'s plant here resumed operation today after more than 200 members of the AFL locals fought their way into the plant this morning through a strong picket line of CIO members to join 200 other workers who had been virtually imprisoned in the plant since it was closed last night as a result of CIO picketing activities.

Between 15 and 20 AFL men were injured in this morning's struggle, four being hospitalized. Although many CIO pickets were known to have been injured, only one identified himself.

About a dozen Port Huron police stood by helplessly during the skirmish. As an aftermath of the battle, one CIO organizer was arrested and detained at police headquarters, although no charge was lodged against him.

More than a score of non-combatants entered the plant peacefully after AFL men had dispersed CIO pickets at the company gate. Guards were posted inside the plant, however, to warn the men against possible invasion.

CIO leaders withdrew their picket line after this morning's encounter and planned a meeting in the Port Huron Labor Temple.

The CIO union called a strike last night after refusing to recognize an exclusive bargaining contract signed between the company and the AFL unions. Picketing was commenced immediately, and pickets not only kept late day shift men inside the plant but repulsed the night shift workers who attempted to enter. Several men were injured in this struggle with the night shift. (Concluded on Page 20, Column 2)

## Finance Firms Now Operating On New Schedules of Bigger Down Payment, Shorter Terms

**August Sales by ACMA Firms Decrease 9.7%**

WASHINGTON, D. C.—Installed cost of equipment sold by members of Air Conditioning Manufacturers' Association in August amounted to \$3,269,792, a decrease of 9.7% as compared with \$3,621,885 sold during the same month last year, reports William B. Henderson, executive vice president.

This is the first decrease of the year below a comparative period of 1936.

Total for the first eight months of 1937 has reached \$71,575,967, approximately twice the \$36,151,088 attained during the same period in 1936. The figure is 40.3% greater than that for the whole of last year, in which sales by ACMA companies reached \$49,942,301.

Explaining the August decline, Mr. Henderson pointed out that seasonal trends moved forward this year, the two biggest months, March and April, being somewhat earlier than those of previous years. The final quarter of 1937 likely will see another sales advance, Mr. Henderson predicted.

## Detroit Users Will Fight Building Code Ruling

DETROIT—Building owners here who have refrigerating machinery installed in their basement are said to be planning protests against enforcement of a provision of the City's Building Code passed last year which calls for two exits in a basement of more than 2,500 square feet of inside area.

The owners are said to be planning protests because the Building Code provision does not make any distinctions between the various kinds of refrigerants, nor is any exemption (Concluded on Page 3, Column 5)

## Advertising Men See Need for Campaign to 'Resell' Capitalism to the United States

CHICAGO—It's about time that industry began to "resell the capitalistic system to the United States," it was decided at the 15th annual convention of National Industrial Advertisers Association, held at the Edgewater Beach hotel here last week.

Charles McDonough, advertising manager, Combustion Engineering Co., New York City, startled convention-goers with his demand for a \$5,000,000 cooperative advertising appropriation to combat the widespread flow of "anti-industry" propaganda.

Equally insistent that some sort of

**Most Drastic Changes Are Made on Rates For Combinations**

CHICAGO—Five of the large national finance companies, as well as many regional and local financing organizations, are now operating on a schedule of terms which sets 30 months as the top time payment period except in apartment house and heating equipment installations, and which requires a minimum down payment of 10% or \$5, whichever is the larger, according to a bulletin just issued by the National Association of Sales Finance Companies.

Previously terms on major appliances had been as long as 36 months, if purchased singly, and often extended 48 months in the case of combination purchases. Time payment terms on combination sales, under the newly adopted schedules, provide that the minimum down payment shall be the combined (Concluded on Page 20, Column 1)

## Valves & Fittings Men Discuss Jobbers

DETROIT—The definition and required qualifications of a refrigeration supply jobber was the principal topic discussed at a meeting of the Refrigeration Valves and Fittings Association held Sept. 22 at the Book-Cadillac hotel here.

Other mutual current problems of the industry were aired at the meeting.

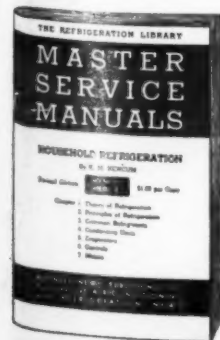
In attendance were Fred C. Schaefer and W. A. Leonard, representing Imperial Brass Mfg. Co.; J. S. Forbes and Van D. Clothier, representing Kerotest Mfg. Co.; Elgin Parker and O. F. Riggins, Jr., representing Mueller Brass Co.; Pete Tazelaar of Commonwealth Brass Corp.; and Charles V. Gary of Henry Valve Co.

action is necessary, but less hopeful of persuading industry to cooperate actively in this endeavor, was James P. Selva, director of public relations, National Association of Manufacturers. Mr. Selva told of the attempts made by his association to restore industry to its favored place in the public eye, and of plans for an Industrial Progress Week to be held next spring.

A. W. Sells, president, Cramer-Krasselt Co., Milwaukee advertising agency, directed an informal panel session at which six industrial advertising managers gathered around a

(Concluded on Page 3, Column 3)

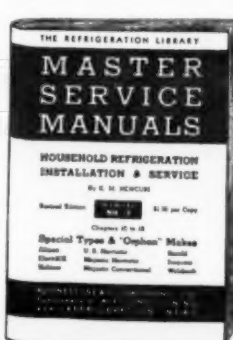
## SEVEN NEW BOOKS on Refrigeration and Air Conditioning Are Now Ready for Delivery



Household Manual No. 1



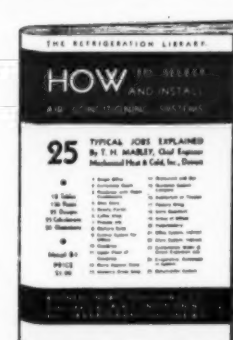
Household Manual No. 2



Household Manual No. 3



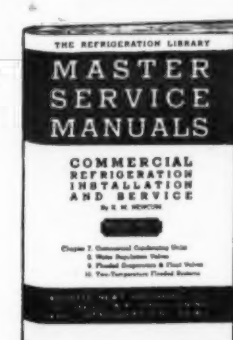
Air Conditioning Manual A-1



Air Conditioning Manual B-1



Commercial Manual C-1



Commercial Manual C-2

The new books shown above are now ready for immediate delivery. Another manual on Commercial Refrigeration Service (No. C-3), and two more on Air Conditioning (Nos. A-2 and A-3) will soon be available. The price of each book is \$1.00. See next week's issue for a synopsis of the contents of each manual in this new popular-priced series.



## Westinghouse Proposes to Get Larger Share of Unit Air Conditioner Business, Say Officials



(1) "Sales of unit coolers," relates Shel Myers, air-conditioning sales manager for Westinghouse, "are up some 40% this year." (2) "But distribution is spotty. High installation costs are hamstringing us in Chicago." (3) "However, the 1938 picture is bright as can be." (4) George Park, Fuller & Smith & Ross air-conditioning specialist, listens, and (5) agrees emphatically.

### Sales & Attendance High At Omaha's Third Annual Electrical Exposition

OMAHA, Neb.—From the standpoint of sales, interest, and attendance, exhibitors at the Third Annual Electrical Exposition held Sept. 13-17 at the City Auditorium report this year's event to be the most successful appliance exhibit thus far held in Omaha. It was sponsored jointly by the Omaha Electrical League and the World-Herald, local newspaper.

Eleven makes of electrical refrigerators were displayed in 37 booths, a survey by the Omaha Electrical Refrigeration Bureau showed. Seven of the 26 exhibitors, most of whom had several booths, were manufacturers and distributors of refrigerators.

Air-conditioning equipment was displayed by three firms, and the Omaha Air Conditioning Council sponsored an educational exhibit.

Booths sponsored by manufacturers and distributors were manned by representatives of local retail dealers. An elaborate entertainment program, including a cooking school staged each day by Miss Greta Griffiths, was arranged for guests.

During the Tuesday evening session, Gov. Nels G. Kraschel of Iowa interviewed five Iowa farmers on a national program over KOIL originating at the electric show.

Clarence O. Heath is president of the Electrical League, and Frank N. Wolf is secretary. Wolf was general chairman in charge of arrangements for the show.

Manufacturers and distributors of refrigerators who maintained exhibits were:

A. Y. McDonald Manufacturing Co. (Norge); Major Appliance Co. (Frigidaire); Allen Appliance Co. (Apex); Westinghouse; Graybar Electric Co. (Graybar); General Electric Supply Corp.; and Sears, Roebuck & Co. (Coldspot).

Air-conditioning equipment exhibits were arranged by Sidles Co. (Chrysler Airtemp); Air Conditioning Co. (Superfex), and Sol Lewis (General Electric).

### REMOVES HEAT QUICKLY



For quick cooling, ice cream cabinets and milk coolers are equipped with ARTIC-charged units. In servicing these units, do as the manufacturers have done—use ARTIC (du Pont Methyl Chloride).

Stocks in standard containers in principal cities for prompt delivery.



E. I. Du Pont de Nemours & Co., Inc.  
THE R. & H. CHEMICALS DEPT.,  
Wilmington, Del.

**ARTIC THE PREFERRED METHYL CHLORIDE FOR SERVICE WORK**

Other exhibitors were:

Nebraska Power Co., Orchard & Wilhelm, Household Utilities Co., Electric Fixture & Supply Co., Radio Accessories Co., General Electric Supply Corp., Sight Saving Council, H. E. Dunn, Inc., Omaha Appliance Co., Micklin Lumber Co., Northwestern Bell Telephone Co., Paramount Radio Shop, Hurley Machine Co., Swanson Petroleum Co.

### Keyes Wins Automobile In Leonard Wholesale Salesmen's Contest

DETROIT—Winners in the nationwide sales contest conducted for Leonard wholesale men by Leonard division, Nash-Kelvinator Corp., and its distributors, have been announced by R. I. Petrie, Leonard sales manager.

First prize, a 1938 Nash-LaFayette automobile, went to R. V. Keyes, wholesale salesman for J. H. Burke Co., Leonard distributor at Boston. Mr. Keyes reports that his winning was aided considerably by one dealer who this year bought 300 refrigerators from him, compared to his first purchase (made more than five years ago) of one refrigerator.

Second prizes of \$100 each were won by: Earl Rannels, Southern Wholesalers, Inc., Washington, D. C.; F. B. Beardon, Peaslee-Gaulbert Corp., Dallas (Houston, Tex.,

branch); F. Viola, L. C. Wiswell Co., Chicago; William Edlund, Electrical Distributing, Inc., Portland, Ore.; D. Crawford, Klein Stove Co., Philadelphia.

Third prizes of \$50 each were awarded to: E. J. Savage, E. B. Latham & Co., Newark; C. Macardell, Morris Distributing Co., Syracuse, N. Y.; Morris Henry, Broome Distributing Co., Binghamton, N. Y.; R. D. Golomb, J. A. Williams Co., Pittsburgh; W. A. Patterson, A. K. Suttan, Inc., Charlotte, N. C.

L. M. Dunn, A. A. Schneiderhahn Co., Des Moines; B. C. McDonald, Graybar Electric Co., Inc., San Francisco; C. B. Lawrence, Nunn Electric Co., Amarillo, Tex.; C. H. Allison, E. C. McKelvey Radio Co., Salina, Kan.; F. Moore, Jr., Southern Furniture Sales, Chattanooga, Tenn.

Weekly cash prizes also were made to winning wholesalers during the eight weeks of the contest.

### G-E Supply Corp. Opens New Evansville Quarters

EVANSVILLE, Ind.—With district officials from Louisville, Ky., present, the General Electric Supply Corp. held open house Sept. 15 at its new Evansville quarters, 422 N. W. Seventh St. The firm had been located for the past 15 years at 105 N. W. First St.

The new location, which contains 22,000 sq. ft. of floor space, was remodeled and the warehouse planned by R. E. Cumming, warehouse supervisor for the company with headquarters at Bridgeport, Conn.



ANY Prest-O-Lite Torch provides a high-temperature flame instantly. No pumping or preheating is necessary. You merely open the valve and light the gas, and the torch is ready for any soldering, heating or light brazing operation. Ask your jobber to demonstrate these modern Prest-O-Lite Torches.

THE LINDE AIR PRODUCTS CO.  
Unit of Union Carbide and Carbon Corporation

New York and Principal Cities  
In Canada:  
Dominion Oxygen Co., Limited, Toronto



### Anchor Lite Co. Host to Store Association

PITTSBURGH—Anchor Lite Appliance Co., Crosley distributor for western Pennsylvania, was host recently to 100 members of the Pittsburgh Regional National Industrial Stores Association at a business meeting in the company's offices and a luncheon in the Seventh Avenue hotel. Harold W. Goldstein, Anchor Lite general manager, presided.



## AT THE REFRIGERATION SERVICE ENGINEER SOCIETY CONVENTION

We have enjoyed your business during the past year and now we are looking forward to meeting YOU—the man who has helped us to prove to the world that WOLVERINE Seamless Copper Refrigeration Tubing is THE tubing for the job.

**WOLVERINE TUBE COMPANY**

1477 Central Ave. • Detroit, Michigan



## Real 'Stopper' Window Display Heads List Of Bendix Sales Promotion Aids

(Concluded from Page 1, Column 2)  
came out of the refrigeration industry, too—concentrated on lining up refrigeration distributors to handle his new automatic home laundry, but he has mapped out a merchandising program which follows principles of specialty salesmanship successfully applied in selling household refrigerators for the last several years.

In addition to Mr. Sayre, President John Scott of Bendix Home Appliances, Inc., talked to the distributors, as did Vice President Otto Lang, Advertising Manager William Leininger, Inventor John Chamberlain, Assistant Sales Manager Verne Calkins, and John Mahoney and V. W. Klierath, vice presidents of Bendix Products.

Vincent Bendix, president of the 30-odd Bendix enterprises, opened the meeting, and was host at a party on his estate Thursday night.

From outside the company came the following speakers: Clark Wilcott, account executive of Brooke, Smith & French, agency which will handle Bendix home laundry advertising; Harry Bruno, publicity man; Katherine Fisher, director of the Good Housekeeping Institute; Carl Smelzer, soap utilization expert from Lever Bros.; and P. Hanlon of the Underwriters Laboratories.

### PROMOTIONAL HELPS

Leading a long list of sales promotional helps exhibited at the convention was a tricky window display which incorporates light, color, and motion, and keeps bringing new sales arguments (like "no wet hands") before your eyes.

This window display was tested in Detroit, with the following results reported: 82 out of every 100 passersby stopped, and watched the display go through its cycle; 24 out of these watchers came in for a demonstration.

Other helps will include a manual on the science of laundering, which may be used as a door-opener, or bait for a call-back; a pictorial tabloid, "Wash Day Around the World"; a pocket-size, leather-bound presentation manual; a standard sales presentation, for memorization; an extension light designed for use in demonstrating what goes on inside the cylinder of the laundry; and a number of printed pieces.

### STORY OF THE MACHINE

Story of the Bendix home laundry (which was described and pictured in the Aug. 11 issue of the NEWS) is that the idea was brought to Vincent Bendix by John Chamberlain and Rex Bassett, the inventors, at a time when Mr. Bendix and Mr. Scott were surveying the home appliance field.

Messrs. Chamberlain and Bassett began with the idea of taking an automatic commercial laundry machine, and bringing it down to household size. Mr. Bendix at once saw possibilities in the idea, but stipulated that the machine must dominate the market, be entirely safe and foolproof, be simple to operate, and have a 10-year life.

He then turned Chamberlain and Bassett loose in a laboratory. They hired bacteriologists and chemists, home economists and designers, and engineers. Some of their most effective help came from technicians on the staffs of soap manufacturers. Laundresses, or "wash women," were also brought into the picture.

### 'SOIL PROBLEM'

They learned a great deal about "soil," such as the fact that the toughest "soil" to eradicate is that inside the collar of a white shirt. High speed photography was employed in their research, that they could learn what agitators, wash wheels, water flow, and whatnot did to and with dirty clothes.

After more than two years of this research, they evolved a machine which automatically soaks, washes, rinses three times, and damp dries. When this model was demonstrated to Mr. Bendix, he said: "Boys, you can put my name on this one."

### MERCHANDISERS SOUGHT

In the meantime, Mr. Scott, who was to head the new Bendix division, had been quietly scouting merchandising talent. Scott had decided that the methods which put household refrigerators across were the methods

for the Bendix home laundry, and so he sought men skilled in their use.

First man picked was Judson Sayre, who had been Kelvinator household sales manager, manager of appliance sales for Montgomery Ward, and assistant to the President of RCA-Victor.

### VETERAN EXECUTIVES

Sayre's assistant, C. V. Calkins, had been a sales executive with Kelvinator and RCA-Victor. William DeWitt, central district manager, had been refrigeration sales manager for Apex. L. J. Chatten, New York division manager, was formerly sales manager for Fada. Gerald Hulett left the vice presidency of Electromaster to become western division manager.

These men then went on the road to line up refrigeration distributors.

The new line is now in production, and deliveries will begin early in October.

## McDonough Urges \$5,000,000 Advertising Fund to Combat Attacks on Industry

(Concluded from Page 1, Column 2)  
table and "thought out loud" as the audience listened in.

Mr. Seiler's "fellow thinkers" were: Roland G. E. Ullman, head of the Philadelphia agency of that name; H. H. Simmons, advertising manager, Crane Co., Chicago; A. E. Hohman, Blaw-Knox Co., Blaw-Knox, Pa.; Robert A. Wheeler, International Nickel Co., New York City; and F. O. Wyse, Bucyrus-Erie Co., Milwaukee.

Although admitting that there is "little immediate danger" of an overthrow of the capitalistic system in this country, Mr. McDonough urged prompt action on his proposal for a two-year paid advertising campaign to combat any such "subversive tendencies."

He declared that increased public approval of business activities is necessary if industry is to survive on its present basis.

Any such program, Mr. Mc-

Donough pointed out, certainly should include ample consideration of the increasing burden of taxation which corporations and business enterprises must bear. "One way to increase public purchasing power," he said, "is to fight the growing tax burden."

Close coordination between advertising and sales departments was stressed as the most important task of any advertising manager by Harry Neal Baum, advertising manager, Fairbanks, Morse & Co.

Mr. Baum stated that weekly sales figures based on a market classification of some 20 industries play a vital part in the coordinated system used by his company. These figures are allocated to their respective industries, and the company thus obtains a quick comparison of sales in each field.

When a product is seen to be slumping, or certain industries seem to be buying less than usual without apparent reason, the advertising de-

partment directs special promotion to these fields.

Mr. Baum emphasized the necessity of a new business paper circulation breakdown which would enable advertising managers to show district sales offices just how much circulation is being directed into their territories.

Other Fairbanks-Morse sales-boosting schemes revealed by Mr. Baum included the questioning of salesmen.

## Detroit Users Fight 2-Exit Rule in Building Code

(Concluded from Page 1, Column 4)  
made for systems that may be so small as to dispel any possibility of a hazardous condition.

The code states that "from all basements of more than 2,500 square feet in area, which house high pressure heating or refrigerating equipment, two exits must be provided."

Since the new provision of the code is retroactive, it would mean that new stairways would have to be constructed in many small drug stores, ice cream stores, restaurants, etc., the building owners contend.

# The Profit Opportunity of a Lifetime!

## Electromaster's Model 100 equipped with VITA-MISERS\*

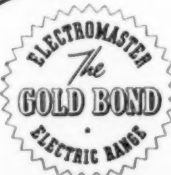
The only one of its kind in the world—it's an exclusive leader!

Offers Sales Possibilities Unequaled Since Electric Refrigeration Started Its Big Upward Swing

DON'T MISS THIS CHANCE!

\*VITA-MISERS—Electromaster's new and original built-in kettles that perform every type of cooking with airplane speed and almost unbelievable economy. ONLY ELECTROMASTER HAS THEM!

DISTRIBUTORS AND DEALERS:  
Send for details of this Electromaster Model 100... learn its low list price... generous discounts... Electromaster's "sure-fire" Sales Aids. Wire, write or phone WALTER C. AYERS, Sales Manager ELECTROMASTER INC. DETROIT, MICH.



Whether or not you are in the electric range business now, you should investigate this marvelous new sales leader... already establishing a record for dealer profit. Its sensational speed and economy now make every household in your community a definite prospect for an electric range. Besides the VITA-MISERS the Electromaster Model 100 has a score of other features that mean fast-repeating sales and steady, substantial profit!

GO TO TOWN with Electromaster!



## SPECIALTY SELLING IDEAS

### 4-Day Trip in Display Trailer Nets Arizona Dealer 24 Kerosene Electrolux Sales

TUSCON, Ariz.—On his first trip with his new Servel Electrolux trailer, Carl E. Molling, owner of Molling Appliance Co., hung up a record of 24 refrigerator sales in four days.

On a second trip a month later, Mr. Molling sold 16 more kerosene refrigerators along this same route.

But let Mr. Molling tell the story in his own words:

"I took this trailer on my first trip to Ajo, Ariz., a little mining town. On my way I passed a little settlement which is called Sells Indian Agency. While I was buying gasoline there, I sold a refrigerator to a Presbyterian minister and another to the head of the Catholic mission.

"I spent the first day in Ajo taking the trailer to some of the miners' homes. By 8:30 p.m. I had sold 10 refrigerators right out of the trailer. That night I parked the trailer at the local plaza and broadcast Servel's 'March of Time' program with hundreds of people listening to it. During the program I signed up a man in the trailer, making a total of 11 sales that day.

"The following morning I started

out at 10 o'clock, and sold nine more refrigerators by 11:30 that night.

"I left Ajo the next morning. I stopped to buy gas in Gibson, which is close to Ajo, and there sold another refrigerator. On my way back to Tucson, I stopped at another filling station and sold the man who owns the store and station an H-1103.

"Never had I sold that many refrigerators in that short a time, and if it hadn't been for the trailer I never would have. I was able to get my customers inside the trailer, and while my assistant played some nice music I closed the deals. Of course it was hard work, but it paid well."

One market owner to whom Mr. Molling sold a refrigerator on his second trip has since wired the Molling Co. to send two refrigerators which he had sold to a pair of his regular customers.

"We sent the two refrigerators to him," says Mr. Molling, "and gave him a \$25 check as a bonus, which 'tickled him to death.'"

A considerable amount of free publicity and good will was received by Mr. Molling and his trailer at the second annual Frontier Fiesta at Nogales, Ariz., when he invited Arizona's Governor R. C. Stanford to broadcast an address over the trailer's loud-speaker system.

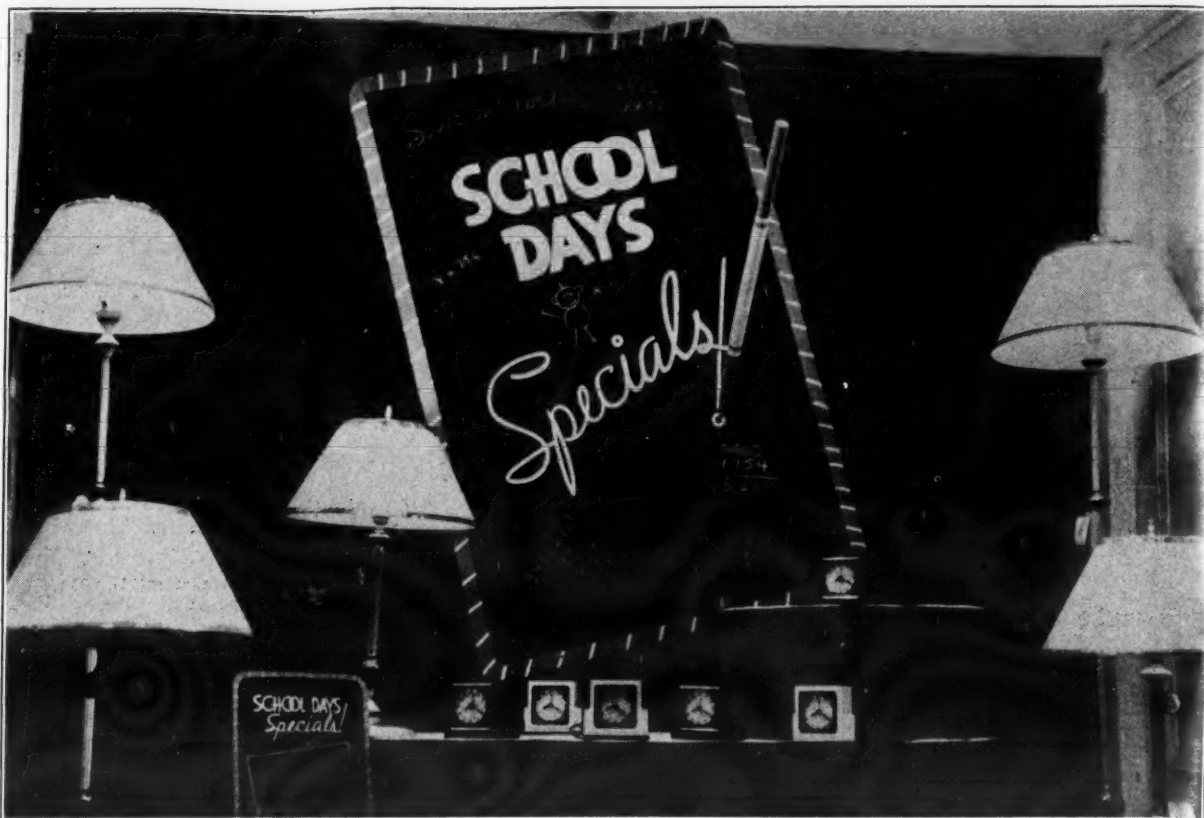
### Dallas Dealer Finds Profit in Employing Superior Salesmen

DALLAS—D. E. Works, owner and operator of the United Music Stores, Inc., is convinced that it pays to employ superior salesmen.

Shortly after taking over the management of the firm, Mr. Works added eight men to his electric refrigerator sales staff, several of whom had held executive positions, all of whom knew refrigerators thoroughly and were well established in the territory.

The result has been a sales increase of 150% over last year.

## Window Display Capitalizes on Current Interest



Most important activity in a vast majority of the nation's homes currently is that of getting the children started back to school. This window display (photographed in a Mansfield, Ohio, utility show window) capitalizes on this interest in an attempt to get parents to come into the store.

### Shipping Tags on Display Show Recent Purchasers

SALEM, Ore.—Shipping tags and colored cardboard pennants have been combined by Allen's hardware store to form a wall display designed to lower the sales resistance of any appliance prospect.

Shipping tags bearing the name and address of recent appliance purchasers are placed in vertical columns on the wall of the store's appliance section. Fastened to these tags are blue, red, green, or yellow pennants indicating whether the appliance purchased was a refrigerator, range, washer, or ironer.

The store's appliance salesmen attempt to find out the address of every prospect as quickly as possible, so that they may point to shipping tags which indicate satisfied customers in the prospect's own neighborhood.

### Using Farm Language Wins Rural Sales, Persistence Sells in City, Says Nellor

OMAHA—Because the rural salesman talks his prospects' language, knows that he can't hurry them, and is persistent, his chances for succeeding in selling in the city far outrank those of the city salesman who gets moved to a rural territory, believes E. J. Nellor, salesmanager of the Norge division, A. Y. McDonald Co., this city.

Mr. Nellor's experience in selling electric refrigerators dates back to when the earliest models were being introduced.

"I have found that as a rule the city salesman is apt to slow down when business is good. He becomes too easily satisfied. When you place him in rural territory he seldom makes good.

"The chief reason for this, I believe, is that the country people speak a language of their own. The salesman reared in a provincial section thinks and acts like his prospects. He feels at home with them. But he knows that they cannot be hurried into buying.

"The city salesman, on the other hand, doesn't understand this—and that's why he doesn't make good.

"I have often noted," Mr. Nellor continued, "that a salesman from a small town or rural section does make good in the city. Why? Because

in the country he has worked on the principle that once a prospect has been contacted he is open to solicitation until the sale is closed. He doesn't alter this idea when he works in the city.

"But the city trained salesman has been taught that he must close the deal within five calls. He thinks he is licked if the sale doesn't work out that way."

One point on rural versus city selling methods which Mr. Nellor believes important is that different buying reasons appeal to the two groups.

The city prospect, he believes, ranks convenience first, then comfort and saving, whereas the rural customer is primarily interested in saving, and considers comfort and convenience after saving.

Another factor which he has noted is that in the city sales increase faster during the first six months of the year, while in the country the opposite is true.

"The city people buy liberally for the first half of the year. Then they take stock and decide that too much of the year's budget has already been spent, so they stop buying. The country mind seems to work counterwise," he commented.

### Little Theater Dramatizations of Appliance Sales Talks Raise Seattle Hardware Volume

SEATTLE, Wash. — Dramatizing sales arguments in a "little theater" equipped to display merchandise as well as to show motion pictures and reproduce sound presentations is the method used by the Seattle Hardware Co., Leonard distributor here, to drive home a clear sales story to its dealers and customers.

The theater contains a raised platform extending around the walls, and a stage in front, both for display purposes. Spectators' attention may be directed to single displays by the use of drapes over the stage or walls.

Stage of the theater contains a

revolving center platform upon which three Leonard models are exhibited at once, and models are shown as the platform revolves.

Across the front of the room a screen is unrolled to show movies of the Leonard refrigerators and their sales features. A radio standing nearby reproduces sound effects to make a talking picture.

The "little theater," according to S. A. Cryslar, manager of Seattle Hardware Co.'s appliance division, has helped to sell many refrigerators since it was first installed a few months ago.

### TAG Snapon Controls FOR REPLACEMENT profits

For Domestic Refrigerators, Water Coolers and Beverage Coolers, TAG Snapon Controls with load protection, fit your service jobs perfectly and profitably. Once adjusted, they permanently maintain their temperature setting. Once set, the mechanism is locked against creeping. Send for the 1937 TAG Snapon Control Catalog No. 1138-25. It contains test equipment for refrigerator service that you should know about.

ASK YOUR JOBBER ABOUT TAG SNAPON CONTROLS AND TEST EQUIPMENT

C. J. TAGLIABUE  
MFG. CO.  
Park & Nostrand Aves.  
Brooklyn, N. Y.

Gentlemen: Please send me a copy of the 1937 TAG Snapon Control Catalog No. 1138-25.  
Name.....  
Address.....  
City & State.....

Send for CATALOG

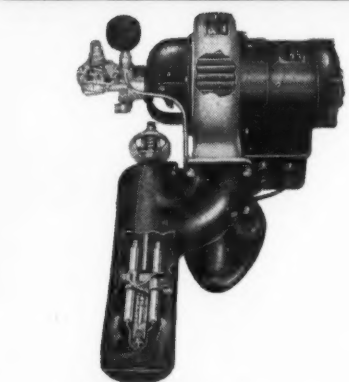


## CONDENSERS EVAPORATORS

34 years specialized experience in this field has qualified us to give you intelligent, practical engineering cooperation on both electric refrigeration and air conditioning applications, large and small.

LONG MANUFACTURING DIVISION  
BORG-WARNER CORPORATION  
DETROIT, MICH.  
WINDSOR, CAN.

# LONG



### S/N Pioneer OIL BURNERS with Slow-Flow Oil Conservor

S/N Burners are built with such refinements as cut-off valve in nozzle instead of in oil line—a safety that cuts off with ALL troubles instead of with only a few—a pump with dual seal and inbuilt pressure regulator—slow-speed motor, and S/N gyroform flame. Burners made in 8 sizes from 1 to 20 gal. per hour fuel capacity using No. 3 and No. 4 oil.

- S/N Dealers Prosper because**
- 1 There's an S/N product for every month in the year.
  - 2 "S/N" means highest quality—at competitive prices.
  - 3 The industry recognizes S/N as pioneers and authorities in the field.
  - 4 A complete line of easy-to-sell accessories "opens up leads" for major equipment.



**SCOTT-NEWCOMB, INC.**  
1932 Pine St. St. Louis, Mo.

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## Bob Richards Spins a Tall One as Westinghouse Men Gather Around



(1) "Oh, you've never heard about the Westinghouse salesman who sold one of our complete kitchens to the wife of a G-E dealer?" asks Bob Richards, Westinghouse public relations counselor. (2) "Well, it was this way: Our salesman knew this lady's niece, and . . ." (3) "So the salesman said: 'Now, madame, this will be a great way to surprise your husband.'" (4) ". . . and then . . ." (5) "Honestly, Mr. Allen, every word of it is true!"

### Harveycutter Heads Leonard District

DETROIT—Appointment of W. G. Harveycutter as district manager for the southern territory of Leonard division of Nash-Kelvinator Corp. has been announced by R. I. Petrie, sales manager of the Leonard division.

In his new position, Mr. Harveycutter will contact Leonard refrigerator distributors in Alabama, Georgia, Florida, Louisiana, Tennessee, and North Carolina.

Mr. Harveycutter entered the refrigeration business in 1923 as a retail salesman. He joined the Leonard organization in 1930 as special field representative after having spent two years as general manager of a Roanoke, Va., distributorship.

For the past three years, Mr. Harveycutter has been Leonard's U. S. government representative at Washington, D. C.

### Mrs. Stella Floyd Promotes Hotpoint Laundry Equipment

CHICAGO—Mrs. Stella Floyd, formerly home economist representative in the Salt Lake district for Edison General Electric Appliance Co. of Chicago, has been placed in charge of experimental and promotional work on Hotpoint home laundry equipment, according to an announcement by Mrs. Mary Schwin, manager of the Hotpoint home economics department.

Mrs. Floyd's headquarters will be in Chicago.

### Schneiderhahn Moves To Larger Building

DAVENPORT, Iowa—The A. A. Schneiderhahn Co. Leonard distributor in Iowa and western Illinois, recently moved to a new modern building at 218 Brady St.

Largest appliance store in the city, the entire first story of the building is used for display. Remainder of the building is used for warehousing and distributing, and includes a completely equipped service department.

### Akron Dealer Takes on Westinghouse Line

AKRON, Ohio—The E. W. Heintz Co., 132 S. Howard St., has been named dealer in Westinghouse appliances. The firm is also dealer in Kelvinator and Electrolux refrigerators. Officers of the firm are E. W. Heintz, president, and E. R. Moats, secretary.

### Spare-Time Salesman Makes 13 Sales in 2 Months

ERIE, Ill.—Surpassing the sales of some full-time dealers operating in larger territories, Roy K. Thorps, freight train brakeman who sells Kelvinator refrigerators in his spare time, sold nine refrigerators in May and four in June, in this town of 900 people.

### Deneault to Manage New North Adams, Miss. Shop

NORTH ADAMS, Mass.—Emile E. Deneault, for the past 14 years head of the sales staff of Streeter Electric Store, has been named manager of the Lacroix Electrical Shop, recently opened here under ownership of Alfred Lacroix of Holyoke.

### Crosley Introduces 4 Washer Models

CINCINNATI — Crosley Radio Corp. has just introduced four Savamaid washer models ranging in size from 12 to 25-gallon tubs, to be operated from power chargers.

Known as the "K" series, these washers are similar to the Crosley standard Savamaid line, except for power equipment. List prices range from \$47.50 to \$87.50.

The "K" series is operated through a countershaft assembly, which is installed in place of the electric motor, according to W. T. White, manager of the Crosley washer-ironer division.

One end of the assembly connects to the washer transmission, through the standard flexible coupling. On the end of the shaft is a V-pulley wheel. A V-belt is used to transmit power from the charger engine to the washer.

### Westinghouse Names McKibbin Apparatus Advertising Head

MANSFIELD—J. M. McKibbin, Jr., associated with Westinghouse Electric & Mfg. Co. since 1922, has been appointed apparatus advertising and sales promotion manager of the company, according to S. D. Mahan, general advertising manager.

Mr. McKibbin was first employed in the sales promotion division of the Pittsburgh Westinghouse office. In 1924 he became advertising manager in the Cleveland office, and three years later held a similar position in the Detroit office.

When Westinghouse formed a central sales district with headquarters in Pittsburgh, he was placed in charge of advertising activities in Ohio, Pennsylvania, Michigan, Kentucky, and West Virginia.

Later Mr. McKibbin moved his office to East Pittsburgh, where he had charge of sales promotion operation involving all industries served by Westinghouse equipment. He was appointed apparatus sales promotion manager in 1936, to coordinate all such activities except those involving Westinghouse merchandising equipment, at headquarters and in district sales offices.

In his new position, Mr. McKibbin will maintain his offices in East Pittsburgh.

### Retail Instalment Sales Pace Slows

NEW YORK CITY—Retail instalment sales slowed their pace during the first half of this year, increasing but 9.4% compared with a gain in all retail outlets of 9.2% and a rise in instalment turnover last year of between 35 and 40%, according to A. W. Zelomek, economist of the International Statistical Bureau.

During the same period, regular credit sales rose 13.3%, the bureau's estimate reveals.

After the large gain in retail instalment sales last year, the lower trend during the first six months of 1937 is regarded by business observers as an unfavorable factor in the present trade equation.

Analysis of the comparative rates of instalment buying, however, must take into consideration two factors, the bureau states. These are:

1. Last year, payment of the soldiers' bonus operated to quicken the speed of credit buying.
2. Strikes in industrial areas this spring served to bring enforced

economy to those temporarily thrown out of work.

The sales trend in industrial areas, the survey says, shows clearly that workers preferred to protect their credit standing by keeping up their instalment payments.

"Consequently, there was a slower gain both in new instalment sales and in cash sales," Mr. Zelomek says.

"This tendency to keep up instalment payments, even at the expense of cash sales, indicates a danger in expanding instalment volume that is frequently overlooked.

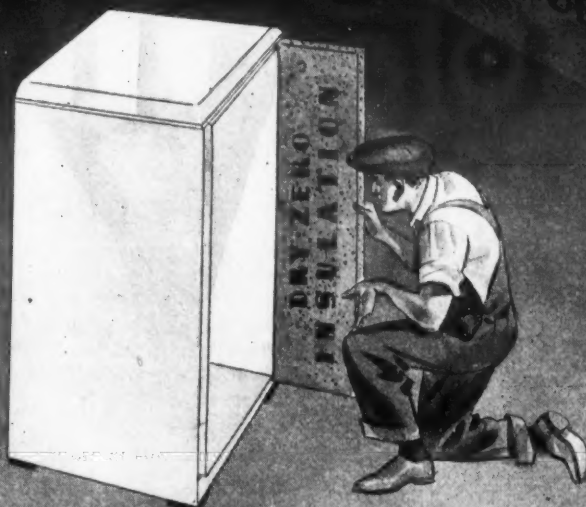
"This danger lies in the decline in cash sales that will follow a business recession as a result of the necessity for keeping up instalment payments. This consideration is probably just

as important as that of the actual losses that may be incurred on instalment volume.

"Such a tendency will be reflected in a sharper decline in retail cash sales during a period of declining business activity than would otherwise be the case."

However, the volume is not yet "dangerously large," it is argued.

## Turn these hidden dollars INTO A SALES ASSET



EXTRA DOLLARS AND EXTRA QUALITY GO INTO REFRIGERATORS BUILT WITH DRY-ZERO INSULATION

DRY-ZERO INSULATION for .24 Efficiency and Permanent Economy

● You dealers are given an additional selling point when your manufacturer puts Dry-Zero Insulation into your refrigerator's walls.

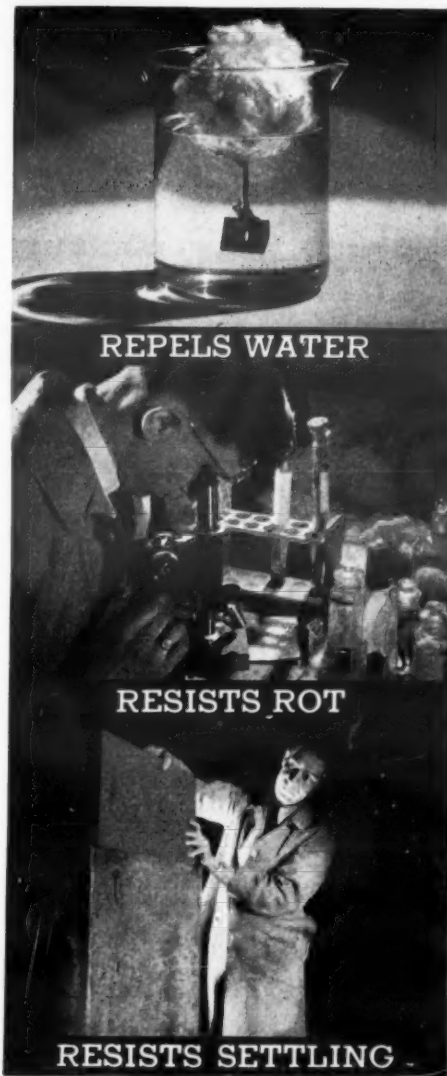
Your manufacturer knows that insulation is an extremely important part of the refrigerator. It is easy to understand that he investigated insulations carefully before making a choice. He could have used a cheap, temporary material. However, his saving of a few pennies would have meant a loss in dollars to your customer—PLUS a loss in customer good-will to you.

He chose Dry-Zero Insulation because of its inherent qualities. It is the only insulation with a heat-stop rating of .24. Furthermore, it is the only insulation that actually repels water. This means that Dry-Zero is the only insulation that retains its heat-stopping ability for life.

Remember, these qualities sum up as a definite advantage to both you and your prospect—PERMANENT OPERATING ECONOMY. Tests prove that over the life of the refrigerator, savings in electric current range from 20¢ to \$2.00 per month, every month.

Use these facts to help you sell refrigerators. Get a free supply of Dry-Zero folders for your prospects. Write to Dry-Zero Corporation, Merchandise Mart, Chicago.

**DRY-ZERO INSULATION**  
REG. U. S. PAT. OFF.  
The Most Efficient Commercial Insulant Known





## SELLING AIR CONDITIONING

### Figure in Service Costs before Paring Profits to Get Sales, Rochester Dealer Advises

ROCHESTER, N. Y.—“The company that doesn't make an adequate profit can't give proper service.”

That statement, a quotation from General Electric's Board Chairman Owen D. Young, should hang over the desk of every air-conditioning dealer in the country, believes Ted Betlem of the Betlem Heating Corp., Carrier air-conditioning distributor here.

There is another motto that should stare the air-conditioning dealer in the face, says Mr. Betlem, and that is:

“Will the job I sold today still show a profit a year from now?”

“Too many air-conditioning dealers are figuring their margin of profit so closely that they have no leeway to afford the proper kind of service that is necessary to build a business,” declares Ted Betlem. “There are all kinds of service calls on which the air-conditioning contractor can't make a charge, and he does a lot of work for which he never gets paid. He has to make a big enough profit to take care of these costs, as well as his regular items of expense.”

#### 42% MARKUP USUAL

In figuring its mark-up on an air-conditioning contract the Betlem Heating Corp. generally divides the total cost by a factor of .7, or a mark-up of 42% on the cost of doing the installation. There are circumstances and cases, of course, in which the mark-up will vary from this figure.

However, Mr. Betlem believes there are only two situations in which an air-conditioning dealer should cut his profit in order to get business. Those are (1) where the installation is the first to be made in a town; (2) where the installation is the first to be made in some particular type of commercial establishments.

“It's important to break the ice in some particular town or some particular market, even to the point of cutting down the margin of profit, but the dealer can't continue to shave his margin and hope to stay in business,” Mr. Ted Betlem warns.

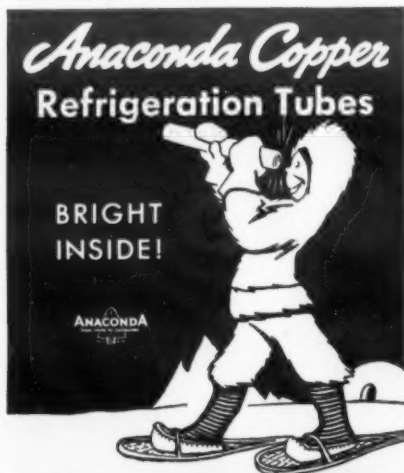
#### REGARDING HENRIETTE

Betlem Heating Corp. is pretty well known throughout the industry because of the publicity gained from the fact that one of the firm members who has done much of its air-conditioning engineering work is a girl—Henriette Betlem.

Miss Betlem and her four brothers are really the entire “works” so far as the company goes, for while a sizeable force of installation and service men are employed, it is the Betlems themselves that account for practically all of the sales and engineering activity.

#### GERARD BROKE TRAIL

Gerard Betlem was the member of the family that broke the trail that lead the family into the air-conditioning business. When he came out of the army he entered Mechanics Institute, and became acquainted with a school teacher by the name of Armbruster, who was designing a humidifying device.



THE AMERICAN BRASS CO.  
FRENCH SMALL TUBE BRANCH  
General Offices: Waterbury, Conn.

“Two very valuable items of experience were carried over into air conditioning from our activity in the heating and ventilating field,” declared Ted Betlem.

“Most important thing that we got from that experience was a knowledge of how to handle air. We don't have to seek special engineering information from the engineering departments of fan manufacturers when we have a particular ventilating problem, because we know what should be done, and the type and size of equipment that will do the job.

#### DO MOST OF OWN WORK

“The other thing we learned is that things work out best when you can do most nearly to 100% of the job yourself. The less work you have to sublet, the better off you're going to be.

“We've found that it has been advantageous to train and educate our own mechanics to do many of the special types of installation jobs

### The Betlems Offer Some Fresh Views on Air-Conditioning Merchandising

This is the third of a series of interviews with air-conditioning dealers, dealing with the problems of management in such a business, told in terms of how successful dealers treat the problems that are typical to all who sell and install air conditioning.

This particular interview is perhaps in a way not typical because the dealership involved, the Betlem Heating Corp. of Rochester, is primarily a “family affair” in terms of executive, sales, and engineering personnel. However, we believe that other dealers will find it interesting and of value, because the Betlems' considerable experience in the air-conditioning field has put them up against many typical problems.

For example, the questions of whether or not there are situations that justify a lower-than-usual markup, whether or not the same charge for service reserve should be tacked on every job, and the matter of how the commercial prospect should be approached. On such points as these the Betlems have views that are fresh and enlightening.

Gerard Betlem collaborated with him in perfecting the humidifier, and a partnership was formed under the name of Armbruster & Betlem, the firm engaging in the heating contracting business. They developed a gas furnace, and at one time did all the installation work on warm air heating equipment for the Rochester Gas & Electric Co. Later the partnership handled the Torrid-Zone line of equipment.

In 1928 the partnership was dissolved and Gerard Betlem in 1929 formed his own company for the assembly and installation of heating equipment, and took his brothers into business with him. In addition to doing considerable furnace work, the Betlem company had a hand in some of the big ventilating jobs in Rochester, so that when the big air-conditioning manufacturers started to look around for dealerships, the Betlem company was known and respected by the manufacturers, and consequently it was appointed a dealer by Carrier Corp.

that are ordinarily sublet to contractors specializing in such work.”

Of course, the fact that the Betlems were in the heating contracting business and have maintained their own sheet metal shop for many years has been a tremendous help in making it possible for them to do the whole job on any air-conditioning installation.

#### GOOD EMPLOYE RELATIONS

Another factor that works to Betlems' advantage is the fact that there is a lot of mutual respect between them and the mechanics who constitute their installation and service force. They've never lost a man they've ever hired in this division of the business.

“Most of these men were trained in the sheet metal trade,” said Ted Betlem, “but we have a couple who came to us from trade schools, and they have worked out very successfully.”

The Betlems are now sending one of their young mechanics to an

### Air Conditioning Is a Family Affair to Them



These are the members of the Betlem family who direct the activities of the Betlem Heating Corp., which has done an outstanding job in selling and installing air conditioning in Rochester, N. Y.

From left to right around the table are John, in charge of furnace sales; Jan (standing), in charge of air-conditioning sales; Gerard C., head of the business and installation manager; Henriette, chief engineer and

assistant in selling air conditioning; and Ted, office manager and accountant.

“We always have a well-rounded organization within the family even though one of the members may be absent,” says Henriette Betlem. “Gerard can take over selling or John can assume installation supervision. Jan has full knowledge of both installation and engineering, and I can take over the office work if necessary.”

extended training course in field engineering at the Carrier factory. When he returns he will in all probability start to do some of the firm's engineering work.

#### MARKUP ON SUBLET JOBS

On any work that is done by a sub-contractor the Betlem Corp. adds at least 5% to the actual cost of the sub-contracted job, to take care of any expenses it may incur for having the ultimate responsibility for the sub-contractor's work.

Also added to the general total in figuring the cost of a job is a “service charge” to handle the cost of making adjustments and repairs over the guaranty period. Ted Betlem points out that this charge is not made on any fixed percentage basis, because:

“It would be unfair to make the same service charge for an installation which might go into a hotel, where the engineering staff would practically preclude the necessity of your making any repairs, as the charge you made for a clothing store installation, where the proprietor certainly couldn't fix the system.”

#### DEPARTMENTS SPLIT

The Betlems, like some other heating contractors that have been successful in air conditioning, found it advantageous to split their operations into two departments—one for heating, and one for air conditioning.

The heating department has quite a staff—10 salesmen and an outside engineer, but Jan and Henriette Betlem are “the” sales and engineering staff on air conditioning. They have had sales engineers working

with them on air conditioning, but gradually found that the two of them—for the present at least—can handle the job very nicely.

#### UTILITY COOPERATION

One of the reasons why more salesmen aren't needed is the fine job of cooperation that is being done by the Rochester Gas & Electric Corp., local utility company. The utility has a couple of men who devote most of their time to seeking out prospects, and checking up on persons who have evidenced an interest in air conditioning. They turn the names and information over to the local dealers.

The utility also checks up on jobs to determine whether or not they conform to a code of minimum requirements as respects cooling, heating, amount of air moved, etc. (the cooling requirement is that the system must be able to produce a 15° F. temperature differential and a 50% relative humidity). If dealers don't meet these minimum requirements, they don't get the utility's cooperation.

#### MORE ABOUT HENRIETTE

To Henriette Betlem must go a great share of the credit for Betlem Heating Corp.'s success in the air-conditioning field.

(Concluded on Page 7, Column 1)

## CURTIS OFFERS A COMPLETE LINE of CLEANABLE SHELL and COPPER TUBE TYPE CONDENSING UNITS

THE complete Curtis line of 86 condensing units includes not one, but 7 models with shell and tube condensers, ranging from 3 to 30 H. P. All Curtis shell and tube condensers have removable heads for cleaning, automatic water valves and spring loaded safety valves. All compressors are equipped with Timken-tapered roller main bearings and Curtis' patented “Centro-Ring Pressure” lubrication, with no wearing parts, providing positive, trouble-free oiling.

There is a Curtis unit for every air conditioning and refrigeration need—from 1-6 to 30 H. P. Eighty-three years of manufacturing experience and a million-dollar corporation stands behind every Curtis product.

Represented in Canada by  
Canadian Curtis Refrigeration Co., Ltd.  
20 George St., Hamilton, Ontario

# CURTIS

## CURTIS REFRIGERATING MACHINE CO.

Division of Curtis Manufacturing Co.  
1912 KIENLEN AVE. ST. LOUIS, MO.

## CONDENSERS

## COMMERCIAL EVAPORATORS

## DOMESTIC EVAPORATORS

## COMFORT COOLERS

## MARKET COOLERS

## AIR CONDITIONING SURFACE

## UNIT HEATERS

## BLAST HEATING SURFACE

# McCORD

## REFRIGERATION AND AIR CONDITIONING PRODUCTS

CATALOGUES ON REQUEST

McCORD RADIATOR & MFG. CO.  
DETROIT, MICHIGAN



## Betlems Adapt Specialty Selling Tactic Of 'Using the User' to Air Conditioning

(Concluded from Page 6, Column 5)

A diminutive, blue-eyed blond, the 25-year old Miss Betlem is a prime example of what can be accomplished through self-education and rigorous application.

She started to do office work for her brothers when they got into business for themselves, but to a girl who had wanted to be a dress designer, office work was a bore. A visit to a convention of the American Society of Heating & Ventilating Engineers bred in her a desire to become an engineer.

Evening school at Mechanics Institute in Rochester, a turn at the drafting board for the company, and an engineering training course at the Carrier Corp. factory provided the basis of an education in air-conditioning engineering, and Miss Betlem took to it like a duck takes to water. Now she figures for the company on most of its jobs. Some of the big installations on which she has done the engineering work are the Monroe Theater, the Hotel Rochester, and the Bausch & Lomb optical plant.

### SOUND FUNDAMENTALS

One might suspect that there was something "freakish" about her success as a sales engineer for air-conditioning equipment—that because she is a woman—and a young and attractive woman—there might be some unusual factor in her sales success.

But a few minutes' conversation with Miss Betlem dismisses any such ideas. You quickly realize that her success in selling is based on fundamental knowledge of the business—she knows everything that a first-class sales engineer should know about air conditioning, and she knows how to translate her knowledge in terms of the prospect's needs.

Her sex, she has found, is probably more of a hindrance than a help. While men she calls upon may be inclined to treat her somewhat more courteously perhaps than they would a male caller, the question that immediately comes to their mind—and sometimes they put it into words—is "what does a girl know about air conditioning?"

Miss Betlem likes to have them ask that question, because it gives her an opening to demonstrate that she does know something about air conditioning, and from there it is an easy step to get into a discussion of the prospect's own peculiar problem.

### BOOK-LEARNING

"The trouble with many air-conditioning sales engineers today," says Miss Betlem, "is that they try to do everything by the book. They know the 'Guide' by heart and they've taken intensive training courses at the factory, so that when they start to make a survey of the prospect's requirements they keep right to the formulas they learned—not from experience, but out of a book.

"They haven't the experience—or even if they do they apparently don't learn from it—to know that the prospect often has requirements that can't be met by consulting some figures in a book, that there are ways of making an installation which may seem unorthodox in theory, but which may be well proved in practice.

### STEP BY STEP

"For example: I called upon the head of a lithographing firm recently, and when he heard that I represented an air-conditioning firm, he just about hit the ceiling.

"So you're another one of those air-conditioning people that are going to sell me a system I couldn't ever afford. Well, you're wasting your time."

"However, I got his permission to look over his plant with the idea of determining just what his requirements were. Then I went back to him and suggested that he might

install a unit heating system that might easily be converted into a year-around conditioning system at some future date.

"Now why didn't some of those other salesmen tell me that," he exclaimed. "All they did was to come in and tell me that I had to have this and had to have that, and then gave me a cost figure that was out of my reach."

"Upshot of this interview was that we eventually sold him a complete air-conditioning system for his plant."

### DON'T BE TOO GOOD

There are many other angles to selling and installing air-conditioning equipment that can't be learned from an engineering manual, Miss Betlem points out. There is the "psychological" factor: for an example, Miss Betlem tells of the store where the Betlems had thought they had made a particularly good installation, concealing all the outlets and creating proper conditions without any drafts.

But the Betlems soon discovered that they'd done too good a job! The proprietor of the establishment complained that he couldn't "feel the air conditioning." So the "perfect job" was changed in order that the skeptical user and his customers would be made conscious of air motion.

### QUALITY, NOT PRICE

When they run into a competitive bid on a job that undercuts theirs, the Betlems quietly ask for an opportunity of going over the plans with the prospect, and put a lot of emphasis on the value of their own experience and the Carrier name. The point the Betlems try to make is that these factors make the job more costly, but are worth it in terms of long-lived and trouble-free service.

Whenever possible, a Betlem salesperson will take a prospect to see some of the installations which the firm has made, and to talk to the users of those installations. Also, a photograph is taken of every installation in order to give prospects an idea of the neat way in which the installation work is done.

### ADVERTISING

From the promotional standpoint, the Betlems have concentrated on newspaper advertising. Last year the Betlem Heating Corp. spent about \$1,000 in newspaper advertising.

The Betlems got that back and more in a direct dividend when the newspaper in which they had placed their advertising decided to air condition part of its building. There's an angle about newspaper advertising that the air-conditioning dealer shouldn't overlook—the fact that most daily newspapers are prosperous, and good potential prospects for air-conditioning equipment in all their departments.

The Betlems prepare their own copy for the newspaper advertisements. Favored type insertion is one in which the installations they have made are listed, with the query:

"Will you be on the list next year?"

### 'PUBLICITY' JOBS

In addition to putting forth special efforts to get key jobs, such as a "first" in any type of commercial establishment, the Betlems also have a penchant for getting jobs that bring a maximum of publicity. Good example of this is the room conditioner they installed for a well-known Rochester lady who had been taking regular trips to a mountain resort for 18 years to gain relief from hay fever.

While none of the local air-conditioning dealers have made much of a dent in the residential market because of Rochester's rather cool climate, the Betlems got the contract for such "key" installations as the

residences of the president of Taylor Instrument Co. and the head of a local shoe firm.

### 'AIR-CONDITIONED BLOCK'

And as regards the commercial market, the Betlems like to point with pride to the part they have contributed to Rochester's "air-conditioned" block. On one block on East avenue are the air-conditioned utility building, an air-conditioned dress shop, drug store, general offices, fur salon, two restaurants, two shoe stores, and one jewelry store. All the jobs except the drug store and fur store are Betlem's.

Cooling equipment totaling 300 rated horsepower has been installed by the Betlem Heating Corp. in Rochester this year. And the dollar volume of business will more than double that of the previous fiscal year, which had doubled the volume done in the preceding fiscal year.

### REAPING THEIR REWARD

The Betlems have worked hard at their share of the job of pioneering a new industry, but they're beginning to enjoy the fruits of their labor now. Henriette Betlem is a boating enthusiast, and for some time had admired a 34-foot cruiser owned by a local merchant, but despaired of being able to purchase it.

One day Miss Betlem got to conversing with him and discovered that he was thinking about installing an air-conditioning system, and that he was willing to part with his boat.

"I made a preliminary layout for him on the spot, so that before the day was over he had plans for an air-conditioning system and I had a boat," she relates the story.

## Miami Air-Conditioning Dealers Cooperate in Utility's Display

MIAMI, Fla.—Local air-conditioning dealers are cooperating with Florida Power & Light Co. in a display of air-conditioning equipment on the utility's sales floor. The utility itself does not merchandise air-conditioning apparatus.

One outstanding part of the exhibit is a 14 x 16-ft. room built on the floor and equipped as a modern living room. This room is cooled by a Delco-Frigidaire air-conditioning unit installed by Meltzer Motor Co.

Each day an amount of water equal to that which the air-conditioning unit has extracted from the atmosphere of this room during the preceding 24 hours is placed in a labeled container outside the door. The water is caught in a pan placed under the air conditioner.

The exhibit has proven so popular that the utility has decided to leave it in place indefinitely.

## 13 Cleveland Dealers Push Winter Systems

CLEVELAND — A newspaper advertising campaign to promote winter air conditioning is being conducted by 13 Cleveland firms through The Electrical League.

Advertisements point out the desirability of winter air conditioning in removing dust and dirt from the air, circulating air through the house, controlling temperature and adding moisture to the air. Cost of converting present warm-air heating systems is paid by a corresponding saving in fuel, it is claimed.

Members of the league cooperating in the campaign are:

A. Home Heating Co., J. Bauman & Co., Cutter Sheet Metal Mfg. Co., William E. Donnelly Furnace & Air Conditioning Co., East Ohio Sheet Metal & Furnace Works, Euclid Sheet Metal & Furnace Co., Harvard Co., Hutton Bros., Knight Heating Co., Lakewood Furnace Co., Poad Sheet Metal & Furnace Co., Schill Heater Co., and Wheatcroft Co.



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Go over any M & E Compressor Unit and you will find feature after feature designed the way they are because each contributes some practical advantage in operation, maintenance and long life... There is an M & E Unit for every refrigeration need—forty-five models from 1/4 h.p. to 20 h.p.—water or air-cooled—electric motor or gas engine driven. Write for Catalog.

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THE TWELFTH SUCCESSFUL YEAR IN ELECTRIC REFRIGERATION



Anaconda Copper REFRIGERATION TUBES Unusually Soft!

THE AMERICAN BRASS CO. FRENCH SMALL TUBE Branch General Offices: Waterbury, Conn.



## Woman Editor Outlines Major Appeals in Selling Her Sex on Benefits of Refrigeration

By Faye I. Hamilton, Equipment Editor of McCall's Magazine\*

**M**ORE than I hate spinach, I hate statistics. But I think a few well chosen figures will save a lot of time in showing you briefly and convincingly that people want automatic refrigerators.

Go back just to the year 1926, when the automatic refrigerator industry first started to promote its product in a big way. At that time only 50% of American families used any sort of refrigerator.

Yet today, over 10,000,000 families own automatic refrigerators—almost as many homes as own vacuum cleaners and washing machines.

### 2,000,000 SOLD

Last year, 2,000,000 families bought household electric refrigerators at an average price of \$164. In other words, last year, American families spent almost a third of a billion dollars for electric refrigerators.

If we add up all the money that has been spent for household electric refrigerators from 1921 to 1936, we see that the public so much wants electric refrigerators that it has spent about two and a quarter billion dollars for them—a sum equal to the amount of money we spend in an average year for public elementary and high school education.

Of course, the public wants a lot of things besides refrigerators, but every bit of sincere enthusiasm you place behind selling automatic refrigerators is well placed. Because the public not only wants refrigerators, but needs refrigerators too.

### SIX MAJOR APPEALS

As I look back over the history of the household automatic refrigeration business, I recall six major appeals that have been used in presenting automatic refrigeration to men and women.

Since these six appeals have sold between 10 and 11 million refrigerators, I think they are appeals we should not easily forget.

The first appeal used to sell electric refrigerators was the appeal of "cleanliness"—and this was an appeal justified both by the appearance and performance of the electric refrigerators. Their white surfaces were so refreshing to eyes accustomed to the old-fashioned kitchen, and their clean-cut design made it so easy to keep the refrigerator itself spotless, and the food within it fresh, that cleanliness in itself was an irresistible appeal to the careful housewife.

And although our kitchens as a

\*A talk given before a meeting of Edison General Electric Appliance Co., Chicago, Sept. 1.

whole today have caught up with the refrigerator, cleanliness is still today a potent, if not so dramatic an appeal as it was then.

The second appeal used was "pride of ownership." This was the day when refrigerator ads showed men and women in evening dress clustered in the kitchen around a new refrigerator. The advertisements frequently read, "Come into the kitchen and see our new refrigerator." Pride of ownership—pride in the possession of worthwhile household appliances—is still an appeal that will work wonders in presenting the story of electric refrigerators.

### 'CREATIVE URGE'

The third appeal in selling refrigerators is something I call "the creative urge." It expressed itself in frozen desserts, mousses, ices, sherbets, ice cream. We are prone to forget that in every woman there is a creative urge. In the midst of housework that seems humdrum, women find expression by creating things.

The fourth appeal, but by no means the least important, is the appeal of "health." You will recall how we talked about 50° F., and how food spoils at any higher temperatures. We talked about bacteria and the germs and the microbes that were able to set to work and spoil food in high temperatures.

In these days, the subject of health is increasingly important; and few modern inventions contribute so much to the good health of every member of the family—father, mother, and children—than a modern, efficient household refrigerator.

The good health of young babies today is due in large part to modern refrigeration in the home. Certainly clean milk has played its part, but the keeping of the baby's milk at low temperature has been equally important.

### 'ECONOMY' USEFUL

The fifth appeal that has been useful in selling so many million refrigerators is the appeal of "economy." Few women are given enough money with which to run their homes. Even today, with all the economies that mass production has made in the price of electric refrigerators, they cost money that looms large in the housewives' minds. Hence, the efficiency of the appeal of economy.

We can tell women, as we have been telling them for a number of years, that with a modern refrigerator, they can do most of their shopping two or three times a week. They can take advantage of week-

end bargains. They can store leftovers. And today, even more than before, that gives a chance to talk about the wisdom of buying a large enough refrigerator to take care of each family's food requirements.

The sixth appeal that has been used so successfully in selling refrigerators is that of "convenience." Convenience, however, isn't just gadgets—sliding shelves, chilled rolling pins, food storage dishes, water cooler, and so forth, but all the benefits and conveniences that a modern refrigerator brings into the average home. The convenience of always having food at the proper temperature. The convenience of a large supply of ice cubes. The convenience of the new low setting, by which the housewife is able to go away for a time and come home to find the refrigerator set at a cool temperature ready to receive perishable foods.

These six appeals are not new. They have been used time and time again. But they are the appeals that have persuaded between 10 and 11 million families to buy electric refrigerators, and deserve use over and over again.

### MORE SALES IN 1937

But this is all past history. Does the public still want household electric refrigerators? That's a fair question and one that should be answered. Last year, 2,000,000 refrigerators were sold. That is, 2,000,000 families wanted an electric refrigerator—and got it. So far this year, I understand that sales are running about 20% higher than last year.

I suppose in time we will have sold most of the families that do not have an electric refrigerator. There will always be millions of homes without electric service and there will always, I am afraid, be millions of homes that haven't the money to afford an electric refrigerator even on the liberal and convenient short term payments that have been arranged. But this doesn't spell the end of the household refrigerator business by any means.

### 'THINGS WEAR OUT'

Things in America have a habit of wearing out. It would seem that almost every family in America that can afford one has an automobile and yet, we sell millions of new cars each year. These cars don't go to families that have never owned an automobile. They go largely to families that have automobiles but who want new ones. So I think the replacement business in this household electric refrigerator industry is our big hope for the future.

Electric refrigerators that were made five and 10 years ago were splendid machines. But the industry has progressed and the electric refrigerators we are selling today, and will sell next year and the year following, will all contain many worthwhile improvements.

Ours is the job not of showing people that they want electric refrigerators—because they have al-

ready proved that. They have accepted household electrical refrigeration. Our next job is to demonstrate to these people that they will be wise in trading in or scrapping their present refrigerators and buying one of the newer improved models which the factories are producing.

The economy appeal of the larger refrigerator has an important place here. And today, as well as yesterday, the old appeals of cleanliness, of pride of ownership, of health, of economy, of convenience, and the appeal to the creative urge are still good.

### APPEAL TO HOUSEWIFE

But even granted that the public wants and will buy refrigerators, I would like to make a suggestion as to the way in which modern refrigeration is presented by the manufacturers to Mrs. Housewife and her husband.

They tell us that women buy 85% of all the goods sold in America. And yet, when I read much of the advertising on household electrical appliances and particularly refrigerators, I wonder whether some of the men copywriters have ever talked to a woman.

So many refrigerator ads are crammed full of copy about the mechanism of refrigerators. I know—and you know—that the average woman doesn't give a continental about whether her refrigerator has a rotary compressor or a six cylinder engine inside it. She isn't interested in the mechanics of the refrigerator—she is interested, vitally interested, in what the refrigerator will do for her.

She's interested in whether it will keep her baby's milk from spoiling, and how it will look in her kitchen, in how many ice cubes it will give her, in its contribution to her family's health.

On McCall's magazine we have made elaborate tests to find out what sort of information on household appliances and refrigerators interest our readers.

### WANT BENEFITS

We find over and over again in our tests and surveys that women are not interested in the mechanics of the refrigerator, but in the benefits it will give them when installed in their homes.

In order to give ourselves a further check on this, we sent out a questionnaire on refrigerators addressed to husbands and wives.

"Aside from price," we asked, "what feature or features would influence your choice between two automatic refrigerators?"

55% of the women said they would be influenced by better facilities for food storage, space for milk, vege-

tables, fruits, sliding shelves and convenience boxes. Only 27% of the men were influenced by those things.

10% of the women were influenced by efficiency in making frozen desserts. Only 3% of the men mentioned that.

20% of the women were influenced by ease of cleaning, as against 3% of the men.

20% of the women said 'good looks,' only 3% of the men mentioned that.

25% of the women, but only 14% of the men were influenced by a well-known brand.

But 40% of the men mentioned economy of operation, 31% were swayed by mechanical perfection, and if you add that those who mentioned safe refrigeration, good repair service and insulation, it would bring the figures on mechanical perfection to 40%.

8% of the men and 8% of the women mentioned quantity of ice cubes.

### SHE SEEKS RESULTS


This is further evidence that men are interested in appliances as machinery; but a woman is interested in them only as they apply to her life. She is not interested in the number of kilowatts her range uses, but in the cakes it turns out; she thinks of washing machines in terms of her children's clean clothes, and in similar terms of refrigerators.

And so, in our articles on refrigerators we talk about the recipes, the uses, the health aspects, the economy, the foods that can be made.

I think all of you will agree that this is the right approach, too, in selling electric refrigerators. Tell the woman what the new refrigerators will do for her, and soft pedal the sales talk on the compressors, the evaporators, the motor, and so forth.

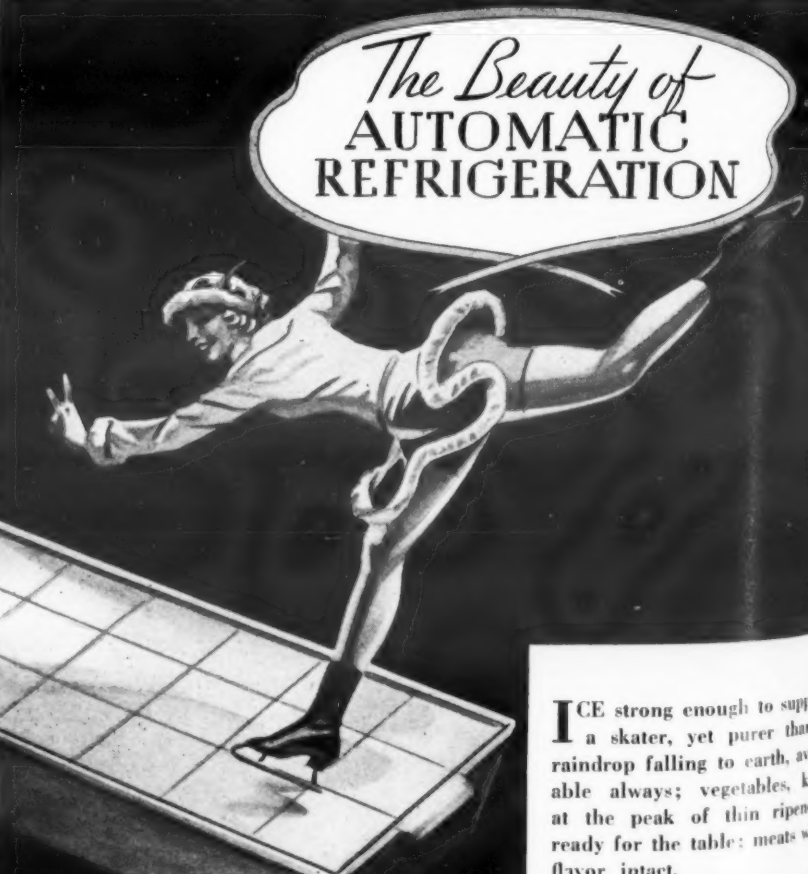
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**The Beauty of AUTOMATIC REFRIGERATION**



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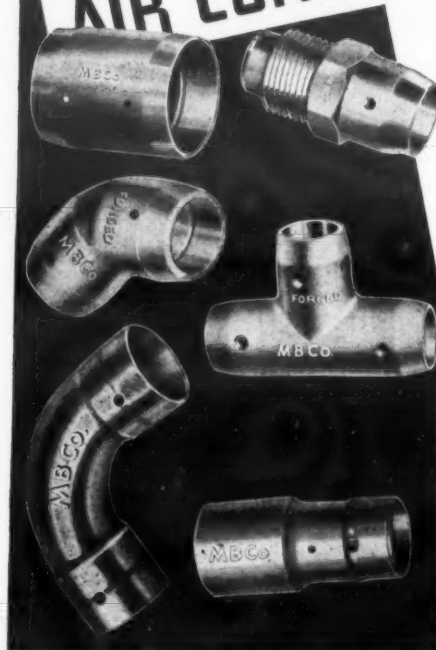
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ICE strong enough to support a skater, yet purer than a raindrop falling to earth, available always; vegetables, kept at the peak of their ripeness, ready for the table; meats with flavor intact.

It's purity that makes these conditions possible. Purity such as only painstaking care and superior skill can insure. The purity that makes EXTRA DRY ESOTOO the refrigeration choice of engineers and service men. An earth girdling work of shipping insures prompt delivery everywhere.

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Brass Forgings which have a tensile strength of approximately 60,000 pounds per square inch, are used in the manufacture of our flared tees, elbows, valve bodies, etc. Specially treated drawn brass rod is used for integral parts of valves, flare couplings, fitting caps, etc.

We manufacture the most complete line of valves, fittings (both flare and solder type) and accessories for mechanical refrigeration work. Send for catalog R-3 and Price List 2003.

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PORT HURON, MICHIGAN

**★STREAMLINE**  
COPPER PIPE AND SOLDER FITTINGS

WILL BE WAITING TO SEE YOU AT BOOTH NO. 10—R. S. E. S.



## COMMERCIAL NEWS

### Putting His Hobby to Work



William T. Smith (left), partner in the Frick commercial dealership of Smith & Berry, Birmingham, Ala., has made valuable use of his hobby, photography. His candid camera shots of Smith & Berry installations demonstrate their equipment much better than conventional catalogs, Mr. Smith reports. It sounds like a good idea, and the customer shown above with Mr. Smith does seem impressed.

### Candid Camera Photos Aid Smith & Berry In Putting Sales Story Across

BIRMINGHAM, Ala. — Letting photographs tell the sales story is key to the success of Smith & Berry, Frick commercial refrigeration dealership here.

Taking pictures is the hobby of William T. Smith, who with Joseph A. Berry is partner in the concern. When an installation is made, Mr. Smith takes his candid camera along, snaps several views of the job, then makes them up into a sales portfolio for his salesmen.

When a salesman calls on a prospect, he doesn't have to depend on catalog illustrations. He can show pictures of similar installations made by Smith & Berry in Birmingham and surrounding territory.

"The country has gone picture crazy," says Mr. Smith, who has won prizes in at least two candid camera contests sponsored by newspapers. "About 85% of our impressions come through our eyes. I decided that the best way to sell refrigeration equipment was to show the prospect pictures of similar installations."

"It might be better to show the prospect the actual job, but that is not always feasible, so pictures are the next best thing. We show only views of installations made by our company, and that carries weight with the customer."

The candid camera has helped Smith & Berry sell its specialty, a water cooler of its own design and manufacture. Mr. Smith made up a sequence of pictures showing steps in constructing the case, including the wood framework, the cork insulation, and the metal covering. Other views show how the zigzag coils and the Frick refrigerating machine are slipped into the container. Each salesman carries a set of these pictures.

The Smith & Berry water cooler is specially suited for bottling plants, dairies, bakeries, ice cream plants, and other concerns which need refrigerated water in manufacturing processes.

Smith & Berry has sold the product to more than 75% of the bottlers in its territory who have made such installations in recent months. Pictures are taken of the outside of the plants as well as the installations themselves, to link definitely these businesses as customers in the prospect's mind. The water cooler sells from \$700 up, depending on size.

Among sales recently made by this concern was refrigeration equipment for the new \$100,000 McGough bakery in Montgomery, Ala. Refrigeration in a bakery allows the bakers to make up most of the next day's output in the afternoon hours and store it in the refrigerator for night baking, thereby cutting down night

work. Refrigeration is also used in the fermentation process.

Equipment in the McGough bakery includes a 5 x 5 ammonia compressor with a 15-hp. motor providing 14.3 tons of refrigeration. A temperature of 78-80° F. is maintained in the fermenting room, with 95% relative humidity.

A refrigeration test plant in the engineering department of the University of Alabama is another recent Smith & Berry installation. It is equipped with measuring tanks and all types of gauges and automatic features, so that students may make tests. Equipment includes a shell and tube brine cooler, a brine heater, and condensers.

"While we make a number of installations in grocery stores and eating places, we have specialized in serving bottling plants, dairies, bakeries, and other manufacturing plants of small or medium size," says Mr. Smith. "These concerns usually have their own mechanic or engineer on duty, so that service calls are held to a minimum."

"With business expanding, a number of plants are finding they need larger refrigeration equipment, so that in several cases we have found customers for their old equipment, making a new sale possible. Some of our customers pay cash, others ask for terms of 12 months or less."

The company maintains its own day-and-night service department, and makes its own installations.

### Jewett Sells Mortuary Units to Government

BUFFALO—Contracts for mortuary refrigerators in six government veterans' hospitals now being built or enlarged have been awarded by the Veterans Administration to the Jewett Refrigerator Co., Inc. here. The hospitals are located in Bath, N. Y., Columbia, S. C., Phoebus, Va., Atlanta, and Jefferson Barracks, Mo.

The mortuary refrigerators are to be of two and three-body capacity, and construction is to be completed within 30 days. Jewett has specialized in mortuary refrigeration for 25 years, its largest installation of this type being a 200-body refrigerator in Bellevue hospital, New York City.

### New Orleans Country Club, Flower Shop Buy Kelvinators

NEW ORLEANS, La.—C. T. Patterson Co., Inc., has installed Kelvinator refrigeration in the Newsham Flower Shop here, and in the New Orleans Country club.

### Boyer Sells Servel Equipment To Mt. Vernon, Ill. Store

MT. VERNON, Ill.—The Fair store has purchased Servel electric refrigeration equipment from J. W. Boyer Co., Servel distributor in the Marion, Ill., territory.

### \$20,000,000 Condensing Unit Sales Seen by Reinach for 1937

DETROIT — Development of air conditioning and expansion of the market for commercial refrigeration will result in the spending of nearly \$20,000,000 this year for commercial condensing units, estimates A. H. Reinach, sales manager of Kelvinator's standard commercial and liquid cooling department.

Last year, sales of this equipment amounted to \$12,400,000; in 1935, sales were less than \$3,000,000.

Ice or refrigeration equipment more than five years old is now functioning at a greater expense than the combined operating and carrying expense of a new condensing unit, so great have recent technological advances been, Mr. Reinach says. These advances have made the replacement market almost as important as the new markets represented in air-conditioning and commercial refrigeration installations, in his opinion.

### Universal Cooler Equips 2 Canada-Alaska Boats

BRANTFORD, Ont.—The Cardena and the Catella, two of The Union Steamship Line ships which navigate between Vancouver and Alaska, have been equipped with Universal Cooler refrigerating equipment.

McKinnon Sales & Service Ltd., Vancouver distributor, installed the equipment, according to W. L. Werner, western manager for Universal Cooler Co. of Canada, Ltd.

### Cities Prospects for Locker Storage Plants Same as Rural Areas, Minn. Dealer Says

MINNEAPOLIS — The growing popularity of refrigerated lockers in both rural and urban areas is opening a new field to business men as well as refrigeration engineers and contractors, declares G. E. Mullin, president of Mullin Bros. Co.

Mr. Mullin's firm, which distributes Baker refrigeration machinery, provides insulation for locker buildings as well as supplying refrigeration and locker equipment.

"The demand for refrigerated locker service has grown until today farmers and townspeople alike realize the necessity for such a system in their community," Mr. Mullin said. "This is proved by the rapidity with which all available lockers are rented in plants now installed."

"The lockers are large sanitary steel compartments, arranged in the manner of safety deposit boxes in a bank vault. A customer rents a locker to which he is given a private key. The room in which the lockers are installed is kept at a constant temperature of 15° F., providing for the storing of quick-frozen fresh meats, fresh vegetables or other perishable food products for each family, who either produce their own or purchase it where they choose, keeping it months if necessary."

"Plant operators employ a butcher to cut up meat for locker patrons, or do butchering for farmers who do not care to do it themselves, for a nominal additional charge."

"One room in the plant is held at 34° F. for properly chilling and

aging meats, which is cut into steaks, roasts, chops, etc., wrapped in parchment paper, and marked for contents. It next goes to the quick freezer, where it is frozen at a temperature below zero. This quick-freezing method keeps the tiny cells in the meat from bursting, thereby retaining all the natural juices and flavor. From the quick freezer, foods are removed and placed in customers' lockers.

"The locker idea was originally designed for the farmer who butchers his own meat," Mr. Mullin explained. "It permits him to kill in summer or winter and saves the bother of having to can or cure the meat. City people also found they could use these lockers by purchasing their meat by the quarter or half at a considerable saving. Strawberries, peas, roasting ears and other fruits and vegetables may be preserved in safety by this method."

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U.E.I. and Refrigeration-Air Conditioning Industry For 10 years U.E.I. has supplied this industry with trained, competent shop mechanics, service and installation men. Our graduates are trained as you want them trained.

Free Placement Bureau U.E.I. trained men are available everywhere. Use our Free Placement Bureau when you need help.

UTILITIES ENGINEERING INSTITUTE 404 N. Wells St. Established 1927 Chicago, Illinois 17 West 60th St. New York, N.Y.



Photos by Underwood & Underwood

The horse at the left is Twenty Grand—winner of the Kentucky Derby. The horse below is an also-ran. They look almost alike to the layman, but only Twenty Grand had the "in-bred stamina"—that extra hidden value that it takes to make a winner.

## In-Bred Stamina Wins!

Outwardly, two race horses may look alike. Yet one will have the necessary "in-bred stamina" that it takes to win, to make money for its owner. And the other will prove to be an also-ran. Generations of breeding, hundreds of hours of training, and thousands of dollars are spent in producing a winning race horse.

It's much the same with commercial refrigeration and air conditioning equipment. Two machine units may be similar in outward appearance. Yet one will stand up under extreme operating conditions, and give long years of satisfactory service. The other, if it is lacking in this "in-breeding stamina," will prove to be an also-ran—to the dealer who sells it and to the customer who buys it.

Servel equipment has stamina built-in! It has a "pedigree" and a "track record"! Fifteen years of careful engineering, painstaking research, and practical field experience have combined to produce equipment that can win!

Write now—for complete details. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.



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**TEMPRITE**  
INSTANTANEOUS  
BEER and WATER COOLERS  
Detroit Michigan



## AIR CONDITIONING AND REFRIGERATION NEWS

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## Complete Lines To Aid Dealer

CYNICAL observers of the present trend on the part of manufacturers of electric refrigerators to put complete lines of household appliances on the market sometimes have the feeling that such manufacturers are simply motivated by a rather greedy desire to get everything they can out of their distributing organizations.

More thorough analysts, however, will discern the fact that offering a dealer a complete line of matched and tested appliances really is helping him achieve a stabilized, profitable business.

To tell the truth, the desire to get a complete line into the field is aroused more by the hope of getting and keeping better dealers than it is by the anticipation of increased dollar volume.

### Too Much of Dealer's Time Spent in Purchasing

For too many years, a specialty dealer has been first of all a purchasing agent. An inordinate amount of his time has been spent listening to field representatives, reading literature, and going to conventions.

He goes through the whole cycle several times a year; in midwinter, for refrigerators; in early spring, for unit air conditioners, washing machines, and small appliances; in midsummer, for oil burners and stokers; in late summer, for radios and ranges.

### Dealer Must Absorb Umpteen Merchandising Systems

Each classification has a considerable number of manufacturers, each trying to excite him about new models, new plans. The dealer works hard, tries to select the particular appliance with the features that appeal to him most, or on which he can get the best deal.

Not infrequently he winds up with Frigidaire and Crosley

refrigerators, Hotpoint ranges, Stewart-Warner and Philco radios, Fairbanks-Morse and York unit coolers, Westinghouse washing machines, Norge oil burners, General Electric small appliances, and Eureka vacuum cleaners—or some such heterogeneous assemblage.

Then comes the task of learning the sales story on each new model of each appliance, plus absorbing the special merchandising system recommended by each manufacturer.

### Field Representatives Put on the Pressure

But that's not all. Field representatives of each line begin to call. In the case of a big dealer, at least four or five a week may show up in his office, ready to talk with him and entertain him. And then comes the pressure.

Back home at the factory or at the distributorship the Frigidaire regional sales manager will be thinking, "Joe Doakes is doing pretty well with our refrigerator, but he ought to be showing our new ranges." The Westinghouse washing machine field man will be told to work on Joe Doakes with reference to refrigerators and ranges. Norge will be trying to move in with a complete line. And so on.

As a result, the dealer begins to wonder if he hasn't made a couple of mistakes. Next season, influenced also perhaps by a new gadget here and there, he switches franchises on certain appliances.

### Wasteful of Dealer's Time, Manufacturer's Training

All this sort of thing is exceedingly wasteful—not only of the dealer's time, but of the manufacturer's training. How often a good refrigeration manufacturer or distributor has trained a dealer, only to have the manufacturer of some other type of appliance step in and gain the benefit of that training!

And how much cheaper it would be for all concerned—dealer, distributor, manufacturer—if only one good field representative were calling on the dealer, rather than five or six!

It is reasoning of this sort which is leading concerns like Frigidaire, Kelvinator, Norge, Hotpoint, and Fairbanks-Morse into expanding their production facilities to include ranges, air conditioning, and home laundry equipment.

### Westinghouse & G-E Success Laid to Complete Lines

Also, they have noticed the great strides made by Westinghouse and General Electric in the last year or so. Credit for the refrigeration sales increases enjoyed by these two firms is given by many field men to the fact that G-E and Westinghouse have been able to cop off the best dealers in many cities simply by offering them extraordinarily complete lines of appliances.

If the dealer can concentrate on one brand, he can spend his time running his business and pushing sales, rather than wasting so much of it as a purchasing agent. Fewer dealer failures, lower overhead costs, and even smaller margins and lower retail prices may be results.

Simplification of distribution means more economical distribution. And systems based on exclusive dealerships for complete lines would seem headed toward better profits and lower prices.

## Meat Prices

MEAT is high. Butchers everywhere are being harassed by indignant housewives who blame them for "gouging the public." In many places, buyers' strikes and picketing of retail meat dealers have seriously affected their business.

Fact is, the meat dealers are no more to blame for high prices of steaks and chops than are the packers. It all began when Henry Wallace and his ill-starred A.A.A. started the massacre of pigs, which resulted in the reduction of the country's hogs to the lowest point in the last four decades.

Then came the droughts of 1934 and 1936, which put feed at a premium, and forced farmers to sell their stock. Present indications are that there will be a serious hog shortage for some time to come, although feed will be plentiful again this winter. High pork prices cause other meat prices to rise, too; and as a result only the vegetarians are happy.

### Salesmen Can Dust off

#### The Economy Story

All of which should interest the household refrigerator salesman, for now he can push his "economy" story. Most American families throw away enough food in a week to feed an oriental family for a month; by saving left-over meats in a good refrigerator, the rising H.C.L. can be successfully attacked. Week-end bargain sales can also be used to advantage by the owner of a refrigerator of adequate capacity.

The "economy story" was one of the strongest factors in the sale of a household refrigerator from 1932 through 1935. In the last couple of years this sales argument has not been so fashionable. Now, however, with the housewives of a nation up in arms over high meat prices, it should be quite effective once again.

## LETTERS

### The Jobbers' Angle

Refrigeration Service, Inc.  
3109 Beverly Boulevard  
Los Angeles, Calif.

Editor:

Time would say, "A plum to Editor Taubeneck for his astute editorial on a definition of a jobber." And I say three cheers for someone who can see and publicize the refrigeration jobber problem from the angle of the jobber himself.

Those of us, and there are quite a few, who have seen the jobbing business grow from nothing 10 years ago to its present considerable size, feel that the jobber who has devoted his energies conscientiously to this end of the business during those years should be entitled to more consideration than he sometimes gets at the hands of refrigeration supply and parts manufacturers.

Your information regarding the problem is so accurate that it certainly must have been obtained firsthand. Such an editorial can probably do more good than hundreds of letters of complaint written by jobbers individually.

May I thank you, not only on behalf of our company, but surely on behalf of all legitimate parts jobbers, for a task well done?

L. P. ROTH

### Myers Appreciates Air-Conditioning Series

Westinghouse Electric & Mfg. Co.  
246 East Fourth St.  
Mansfield, Ohio

Editor:

If all future series of interviews of air-conditioning dealers are as interesting as the one contained in the

Sept. 15 AIR CONDITIONING AND REFRIGERATION NEWS, I know they will go over big with your readers, and do a great deal in helping many distributors stay out of the familiar "dog house."

You are to be congratulated for initiating such a series, and if there is anything that Westinghouse can do to add to your series, in the way of actual facts and figures, do not hesitate for one minute to let us know.

We are very proud of our 110 air-conditioning engineering contractors. We feel we have about the best class of contractors in the business, and from the volume of business they have given us this year, together with the large number of active negotiations they all have at the present time, many of which are closing right now, we are looking forward to a real bang-up 1938, and will certainly appreciate, from an industry viewpoint, a continuation of your series of down-to-earth interviews.

S. F. MYERS, Manager,  
Air Conditioning Sales.

### Palestinian Market Going Strong

British Thomson-Houston Co., Ltd.  
Electrical Engineers & Manufacturers  
Palestine Branch  
26 Gruzenberg St., P.O.B. 331  
Tel-Aviv

Editor:

I read with real interest the editorial in AIR CONDITIONING AND REFRIGERATION NEWS, July 28, 1937, which has just reached me today, and which I assume you have written.

The political interpretation must always have the personal point of view, and I certainly want to congratulate you upon your keen interest and sympathetic attitude to the Jewish Palestine problem. However, there is another point of view, for example; that the division of Palestine was planned long ago by a far sighted Colonial office whose imperial interest comes first and foremost.

The main point to the accomplishment of the objective would be to prove that the Jews and Arabs would not work together, therefore, the disturbances were instigated and permitted to continue to prove this point. The division is so arranged that the Haifa Port is English, southern part of Palestine is English through which the Akab Bay to the Mediterranean canal can be cut in case of trouble in the Suez. (You wrote about it in your travel account.)

With this you can understand many things, just why the disturbances stopped when the Royal Commission was announced to sail, why there are no disturbances now, why the Mufti in Jerusalem is restrained now when no disturbances are wanted, etc.

However, actual business facts cannot be subject to quite such extreme interpretations. I am, therefore, surprised to note that you stress the fact that Palestine is a worried market.

Let me give you actual sales for the first six months of this year. You will note that we sold over 500 units to the amount of LP 19,356—and we feel certain that we will reach at least a sale of 800 units for this year, which is an indication that the market is normal.

Anyway, I want to again congratulate you upon your interest in what is going on here. With kindest personal regards, I am

MAX A. GREENBURG,  
Manager.

REFRIGERATOR SALES IN QUANTITY DURING 1937					
	Tel Aviv	Haifa	Jerusalem	Beyroth	Total
January	1	2	1	1	5
February	27	17	3	1	48
March	87	19	16	2	124
April	79	36	15	14	144
May	61	35	14	10	120
June	40	24	9	8	81
					520
					L.P. 19,356

### Minneapolis-Honeywell Handles B & B Controls

National Regulator Division  
Minneapolis-Honeywell Regulator Co.  
2301 Knox Ave., Chicago, Ill.

Editor:

On page 17 of the Sept. 8 issue of AIR CONDITIONING AND REFRIGERATION NEWS, question No. 3107 refers to B & B controls.

This is to advise you that the Minneapolis-Honeywell Regulator Co. has purchased the entire stock, tools and equipment pertaining to temperature control from Bishop and Babcock Co. of Cleveland. Since that time, the Minneapolis-Honeywell Regulator Co. has purchased the National Regulator Co. and this latter company, which is now known as the National Regulator Division of the Minneapolis-Honeywell Regulator Co., is handling the Bishop and Babcock line of temperature controls.

I believe that your paper carried an announcement of both of these purchases, but I am giving you this information in order to correct any misunderstandings in the future.

J. E. HAINES, Manager.

### Air-Conditioning Experts

64 Morton Road  
Toronto, Ont., Canada

Editor:

Would you be good enough to send me the names and addresses of the six foremost air-conditioning experts—that is, the leading recognized authorities on the subject.

EDWIN SMITH.

Answer: Your question sounds simple enough but it is not so easy to furnish an answer. It would help matters somewhat if you would explain why you want this information.

There is so much difference of opinion about air conditioning, as might be expected in a new industry, that the determination of a "recognized authority" depends a good deal upon who is doing the recognizing.

However, your question is an interesting one and we asked the opinion of F. O. Jordan, air-conditioning editor of the News and author of the new series of manuals entitled AIR CONDITIONING MADE EASY. He immediately suggested the following: Willis H. Carrier, Chairman of the Board, Carrier Corp., Newark, N. J.; E. Vernon Hill, Director of Education & Research, Refrigeration & Air Conditioning Institute, 2150 Lawrence Ave., Chicago, Ill.

Walter L. Fleisher, Consulting Engineer, 11 W. 42nd St., New York, N. Y.; Samuel R. Lewis, Consulting Engineer, 407 S. Dearborn St., Chicago; L. A. Harding, Consulting Engineer, Prudential Bldg., Buffalo, N. Y.

Perhaps modesty was responsible for Mr. Jordan's hesitancy in naming the sixth man.

Readers who have opinions on this question are invited to send in additional nominations of men who qualify for the distinction of "foremost air-conditioning experts" or "leading recognized authorities on the subject."

### Recent Information on Rural Refrigeration

Cooperative Extension Work In Agriculture and Home Economics  
State of Delaware  
Newark, Delaware

Editor:

I am getting together material for a discussion on electric refrigerators for the rural groups with whom I come in contact in connection with the Rural Electrification Program and will greatly appreciate any information you can send me. Was recently referred to the March 22, 1933 issue of ELECTRIC REFRIGERATION NEWS and am enclosing 10 cents for a copy. From the description this is a very comprehensive review of the refrigerators on the market at that time.

If you have more recent data, I shall be glad to have it as I know the situation changes very rapidly in this new field.

RUTH MINTURN,  
Home Management Specialist.

Answer: Listed below are stories on rural refrigeration which have been published in recent issues of the News:

"Community Storage Plants Are Proving Popular in Idaho"—Oct. 14, 1936, page 2.  
"Refrigerated Locker Service Gives Farmer Fresh Meats and Vegetables Year Around; First Plants Built in Washington"—Feb. 10, 1937, page 11.  
"300 Cold Storage Locker Systems in Use in Iowa"—Feb. 17, page 12.  
"Farmers Use Electricity to Thaw Calves' Ears, Make Cider, Feed Frogs, Fight Drought"—March 10, page 21.  
"Rural Market Expands," editorial—

March 17, 1937, page 14.  
"Curb Land Speculation to Make Farming Safe and Electrification Possible, Says Utility Executive"—March 17, 1937, pages 16 and 18.  
"Rietz Sees Huge Market for Manufacturers in Rural Electrification"—March 31, 1937, page 5.

"Small-Scale Farm Community Refrigeration Benefits Studied on Faragut Project"—April 7, 1937, page 6.  
"Building of Individual Cold Storage Plants Profitable to Many Apple Growers" by C. D. McLaughlin, Kelvinator Corp.—June 2, 1937, pages 18 and 19; and June 9, pages 24 and 25.  
"Development and Present Applications of Rural Storage Lockers Outlined for A.S.R.E. by Baker Engineer" and "New Types of Farm Refrigerators and How They Are Used Described by Tucker"—June 16, 1937, page 6.  
"Farm Market Can Be Pushed Faster with Proper Study of Farmer's Needs, Henton Tells A.S.R.E."—June 16, 1937, page 7.  
"Rural Opportunities," editorial—June 16, 1937, page 12.

"Successful Operation of Refrigerated Lockers in Iowa Farm Communities Told by Salesman for Systems"—Aug. 25, 1937, page 8.



# THE AIR AGE

BY F. O. JORDAN

## Year-Around Business In Air Conditioning

Dayton, Ohio

Sept. 14, 1937

Air-Conditioning Editor:

I enjoyed your editorial in a recent issue and was surprised to learn there is actually a shortage of skilled mechanics in the air-conditioning field.

My past experience in seeking employment as a mechanic may be summed up as follows: the average local dealer will not guarantee year-around work for his men and some of us cannot afford to accept temporary employment.

As a result I have put myself on the shelf, and have found employment outside the industry; until I can find the ideal employer, who will take care of me the year around. After all if I help a business during their rush season, I am entitled to some consideration, other than the weekly pay check. If you know of any employer who meets my requirements I would be glad to learn of him.

L. W. PADDOCK

**Answer:** It is true that the employer whom you have helped during his rush season should try to carry along his organization over the off-season if possible, not only out of consideration for the faithful employee, but also for his own good during the next rush season. For the employer generally will find it expensive as well as difficult to build up an effective organization which can carry him comfortably "over the hump" every year only to turn his trained men loose for a competitor to grab after his own rush is over.

He always will have some competitors who have no serious off-season slump. Such slumps can be avoided in the main by foresight in selecting a complete line of merchandise for some part of which a demand always exists.

### ICE AND COAL PARALLEL

Even the coal dealer in our old home town knew better than to try to make an all-year living selling a strictly seasonal or part-time product like coal. Therefore, he was an ice man in the summer. And for the same reason, the ice man was a coal man in the winter time. Coal and ice became another traditional affinity like Romeo and Juliet, and ham and eggs.

Likewise, that dealer who turned you out after you had helped him over his "hump" should realize the impossibility of keeping up his all-year business curve unless he deals in all-year air conditioning. Paralleling the policy of the coal and ice affinity of that bygone day when we were young, your short-season dealer should carry winter comfort equipment as well as apparatus for summer comfort.

And it would do no harm for him to take on a good line of house insulation, for house insulation makes summer air conditioning possible by its very material influence in reducing air-conditioning costs; a line of good attic fans for the great army of people who can afford nothing better, is another possibility.

### EXAMPLE OF SUCCESS

As just one example of what has been done, is an air-conditioning distributor whose territory is located in the superheated mid-western plains where a sub-zero 60-mile-an-hour gale is nothing unusual in winter.

Taking advantage of the extremes in weather offered by its locality (the conventional condition in most of the U.S.A.), this concern deals in all-year air conditioning.

During a recent interview the manager of this successful air-conditioning sales organization declared:

"The small dealership, especially in the small and medium-size city, can't afford to get into air conditioning at present, except on a part-time arrangement—that is, handling air conditioning in addition to major appliances or some other line of equipment that will insure a fairly steady income the year around."

"There's too much pioneering work in these small towns for the dealer—the normal small-town dealer, that is—and sales are too few between."

### SALARIES PAID

On its headquarters engineering staff, this company has a chief engineer and four assistants, whose salaries range from \$300 to \$500 per month. Two draftsmen work in the department, at salaries of \$100 to \$135 a month, and two sales engineers cover the local metropolitan area at a salary of \$200 a month and a 1% override on sales.

Another sales engineer, who is paid on the same basis as the two metropolitan workers, handles field engineering work in the territory outside the metropolitan area.

To contact its dealers throughout its territory, this distributor employs two dealer organization men, one covering one state and one another, and pays them \$200 a month, plus 2% on sales.

In its metropolitan area, the company has two sales supervisors, one handling retail and the other wholesale business. Both receive salaries of \$200 a month plus a 2% override.

In its service department, this distributor has a service manager at a salary of \$200 a month; a stock-clerk whose duty it is to clear all service work, and assign service men to jobs; a steam-fitting foreman, and a refrigeration service foreman.

### NOT ENOUGH GOOD MEN

A very interesting feature is that their employees are carried all year at salaries which compare very favorably with those of much older industries.

During the interview which yielded the above information, the manager declared one of his serious problems to be a shortage of well-trained, competent men. When asked what training his beginners had, he said, "None of them are beginners. They've been around the refrigeration industry for a good many years."

As to the average earnings which they believed to be representative of the refrigeration and air-conditioning industry a group of leading executives in these industries recently agreed upon the following:

Household Service Man	\$25—\$40 per week
Commercial Service Man	\$35—\$50 per week
Air Conditioning	
Service Man	\$40—\$65 per week
Installation & Service	
Superintendent	\$65—\$100 per week
Sales Application	
Engineer	\$5,000—\$10,000 per year

Also agreed upon by these men was the necessity of 50,000 to 75,000 newly-trained men within the next 10 years.

Are these opportunities worth equipping yourself for?

### ALL-YEAR BUSINESS

If the air-conditioning dealer expects to eat regularly throughout the year, he should deal in all-year air-

conditioning equipment which keeps its user comfortable throughout the year. This is specially true if he is a dealer only in small unit conditioners and residential air-conditioning equipment because of the reluctance of the average man to buy this class of apparatus except when he feels an immediate need for it.

Since the installation of heavy equipment is a business proposition and requires considerable time to install, it is much more common for the purchaser of this class of air conditioning to buy summer comfort for his customers in the winter to be ready for the inevitable arrival of summer in plenty of time for them, so that they will not go elsewhere to trade.

### BE ALL-YEAR EXPERT

Here is the moral for the beginner—since the successful air-conditioning dealer must deal in all-year air-conditioning products in order to have an all-year business, it is up to you to make yourself an all-year expert in all-year air conditioning so that you will be useful to the all-year dealer throughout the year.

If dealers and employees will get together in equipping themselves properly for the all-year aspects of this air-conditioning business, there is no good reason why they cannot keep each other busy all year and eat just as much under the frosty regime of Old Man Winter as in the "good old summer time."

For the prospective employee, there are good correspondence and trade schools offering their services—and last but not least, remember that copies of AIR CONDITIONING MADE EASY, the all-year air-conditioning manual are now available.

## If You Really Want To Get Ahead

Want to get somewhere in air conditioning, young man? Then get yourself a job as private secretary to some executive in the industry, and keep your eyes and ears open while he's doing his heavy thinking. You'll not only learn the business from the ground up, but from the inside out as well.

This is the counsel of a man who ought to know—Willis H. Carrier, board chairman of Carrier Corp.

It came out while the man from Newark was discussing the need of the air-conditioning industry for trained men, the proper ways of training men in the ways of air conditioning, the glaring weaknesses in many contemporary training courses, and the opportunities offered by this newest industry.

Declaring that the prime objective of the course of training in air conditioning and refrigeration must be to ground the student so thoroughly in the fundamentals of those cooling sciences that he not only talks air conditioning, but thinks in terms of air conditioning, and feels it in his very bones, Mr. Carrier insisted that the only sure way to arrive at the desired result was via constant repetition of simple truths.

Suddenly in the midst of a discourse upon the clarifying virtues of the simple, oft-repeated word versus impractical theorizings, Mr. Carrier remarked:

"Say, do you know the real way for a young fellow to get ahead? Get himself a job as a private secretary to the boss. Then if he has

brains he can learn how the business really is run. If he doesn't have brains he can't hold the job anyway."

In substantiation of his theory, Mr. Carrier recalled an incident when he broached the same plan for getting ahead to an important leader of big business. When he got through, the big man replied:

"Say, that's the way I got my job."

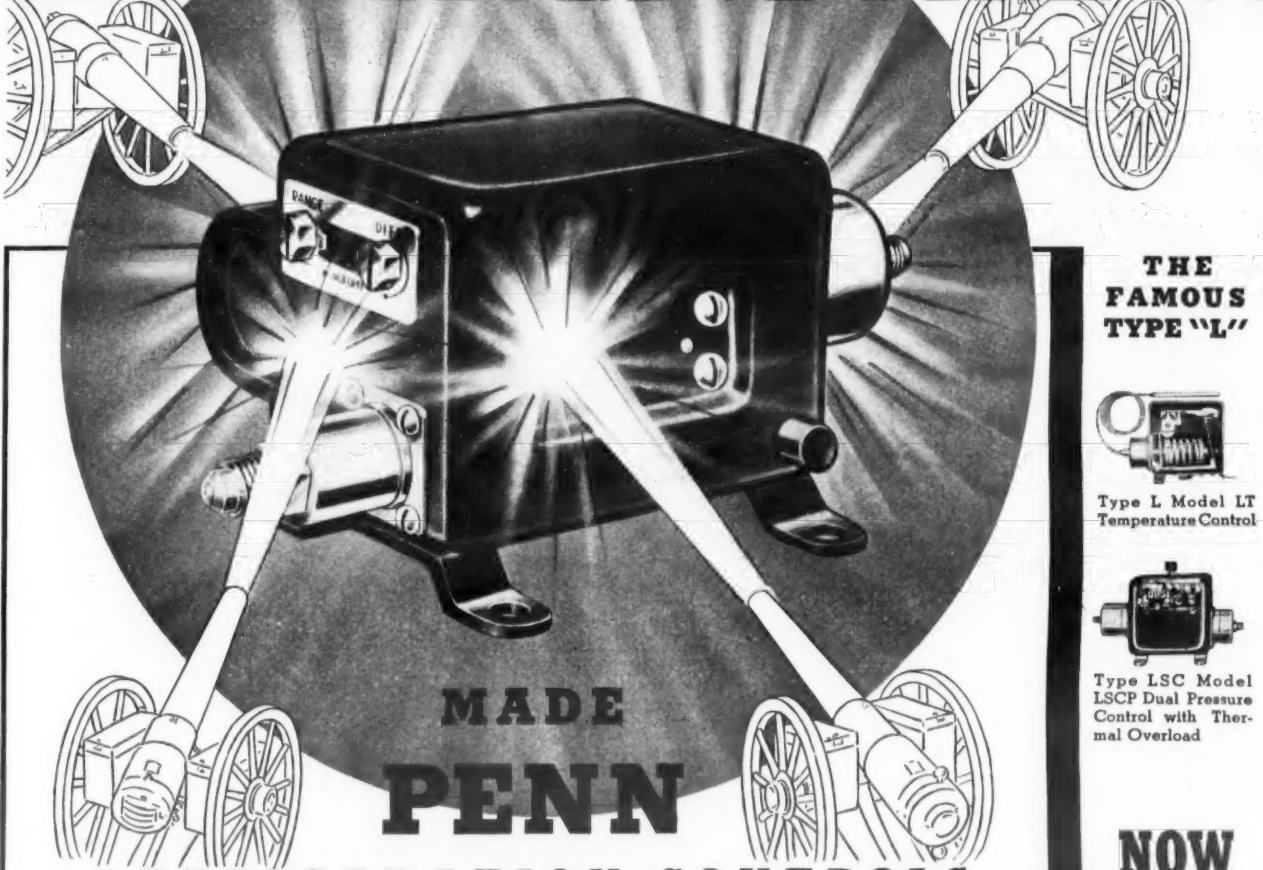
The story recalled a similar one to F. M. Cockrell, publisher of the NEWS. He was invited to attend a meeting of the Board of Directors of a large industrial concern. During the conference it became necessary to give some dictation. When it developed that no secretary was available the president of the company took the required dictation in shorthand and the day was saved.

Only catch is, we can't all be the secretary to the boss, for there are not enough bosses to go around, and besides some gentlemen prefer blonds. Anyway, we seem to recall that Mr. Carrier has not done so badly for himself in air conditioning, so it appears that a secretaryship is not exactly mandatory for success.

However, there is a moral worth remembering in this boss' secretary-to-boss idea, for the underlying thought for the day is that to win big success in anything, the best and surest way is to get right down to the fundamentals and learn all the moves by heart.

Applied to air conditioning, this means to learn and understand all of the fundamental laws upon which air conditioning is based until you not only talk its language, but think in its terms, so that no translation is necessary for you to pass from thoughts to accomplishment.

# A BAPTISM OF FIRE...



MADE  
PENN

## REFRIGERATION CONTROLS THE STANDARD OF TODAY

Grueling service, year after year, under adverse as well as normal field conditions... constant development of improved controls and control methods... discarding experimental designs which failed to meet the Penn standard of quality... this has been a quarter of a century of progress and we are proud of the products we have built. Whatever may be your needs to control refrigeration or cooling in store, factory, or residence—you can depend on Penn.

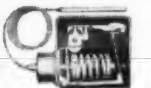
Of particular interest in the industry are the new 200 type controls. They have filled the long felt need for a moderate price control built to most rigid commercial standards.

CONSULT THE PENN-MEN FROM

**PENN ELECTRIC SWITCH CO.**  
**GOSHEN, INDIANA**

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### THE FAMOUS TYPE "L"



Type L Model LT  
Temperature Control



Type LSC Model  
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### NOW THE NEW 200



Type 209 Dual Pres-  
sure Control — with  
Thermal Overload



Type 213 Tempera-  
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perature Control

The Distributor Who Sells the

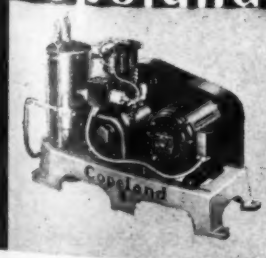
## Copeland REFRIGERATION LINE

IS BUILDING GOOD-WILL FOR  
YEARS TO COME!

It is just good business foresight to sell your customers a quality-built Copeland product. Whether you sell a Copeland Household Refrigerator, Commercial Refrigeration, Washer or Ironer, you are wisely building up a backlog of long-time customer satisfaction that will pay you dividends in continued patronage for many years.

Write for Sales Plan

**COPELAND REFRIGERATION CORPORATION**  
Holden Ave. at Lincoln — Detroit





## AIR CONDITIONING SURVEYS

### Surveys Show Number of Installations by Types of Business in Leading Cities

Starting on this page and on succeeding pages through page 19 are to be found surveys showing the number of air-conditioning installations made in leading population centers through June 30 of this year.

The surveys were obtained through the cooperation of the operating power companies serving the various areas for which data is given.

Installations are classified by type of establishment in which they were made, and their number and horsepower rating is shown. This holds true for all surveys unless some other method of classifying or rating the installations is indicated in the heading over the columns of figures.

The data has been compiled under the following standard groupings: (1) all installations made prior to 1936; (2) installations made during the entire year 1936; (3) installations made during the first six months of 1937; (4) grand total for all time.

#### New York City (Manhattan & The Bronx)

(Data Furnished by Consolidated Edison Co. of New York, Inc.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	21	2,957.0	4	341.33	2	84.0	27	3,382.33
Barber Shops	2	125.3	0	0.0	0	0.0	2	125.3
Beauty Parlors	2	12.2	2	37.75	1	55.25	5	105.2
Offices	174	9,180.4	28	876.45	19	691.45	219	10,748.3
Stores	104	5,725.31	59	1,694.4	42	1,749.36	205	9,169.07
Clubs	6	87.25	2	50.25	2	67.66	10	205.16
Industrial	18	487.75	20	557.03	11	99.97	49	1,144.75
Office Buildings	2	370.0	1	67.0	4	806.06	7	1,243.06
Residential	33	103.3	5	20.33	2	3.58	40	127.21
Restaurants	167	6,757.63	90	2,556.09	59	1,715.59	316	11,029.31
Showrooms	12	90.5	26	981.76	33	401.85	71	1,474.11
Theaters	71	14,575.0	8	344.9	17	1,512.61	96	16,432.51
Hospitals	0	0.0	1	50.0	1*	20.0	2	70.0
Dance Studios	0	0.0	2	148.4	1	160.0	3	308.4
Hotel Guest Rooms	18	2,277.0	2	170.33	1	315.0	21	2,762.33
Hotel Coffee Shops and Dining Rooms	0	0.0	0	0.0	15	470.85	15	470.85
Radio Studios	0	2,086.0	1	10.0	0	0.0	1	2,096.0
Pullman Terminals	0	0.0	1	240.0	0	0.0	1	240.0
R. R. Trains (pre-coolers)	0	0.0	0	0.0	2	1,340.0	2	1,340.0
Auditorium	0	0.0	1	136.0	0	0.0	1	136.0
Apartment Building	0	0.0	0	0.0	1	231.0	1	231.0
Libraries and Museums	0	0.0	0	0.0	1	250.0	1	250.0
Miscellaneous	34	2,077.7	0	0.0	2	124.66	36	2,202.36
<b>Totals</b>	<b>669</b>	<b>46,912.34</b>	<b>251</b>	<b>8,282.02</b>	<b>216</b>	<b>10,098.89</b>	<b>1,136</b>	<b>65,293.25</b>

\*Dog and cat hospital.

#### Birmingham, Ala.

(Data Furnished by Birmingham Electric Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Offices	13	53.0	16	128.3	10	47.0	39	228.3
Residences	8	42.6	10	16.2	2	1.5	20	60.3
Restaurants & Drug Stores	6	165.0	5	183.9	8	136.49	19	485.39
Retail Stores	11	924.0	10	70.2	9	99.58	30	1,093.78
Theaters	4	595.0	3	61.5	3	182.5	10	839.0
Auto Showrooms	1	13.0	0	0.0	0	0.0	1	13.0
Auto Service Stations	1	1.0	0	0.0	0	0.0	1	1.0
Radio Studios	1	1.0	0	0.0	0	0.0	1	1.0
Industrial	1	2.5	0	0.0	0	0.0	1	2.5
Standby Railroad Cars	5	50.0	0	0.0	0	0.0	5	50.0
Barber Shops & Beauty Parlors	0	0.0	1	3.3	3	20.33	4	23.63
Department Stores	0	0.0	4	333.5	3	980.7	7	1,314.2
Funeral Homes	0	0.0	0	0.0	3	33.25	3	33.25
Miscellaneous	0	0.0	3	124.0	2	31.75	5	155.75
<b>Totals</b>	<b>60</b>	<b>1,937.1</b>	<b>52</b>	<b>920.9</b>	<b>43</b>	<b>1,533.1</b>	<b>146</b>	<b>4,301.10</b>

#### Carrier to Spend \$75,000 on Repairing Franklin Plant

SYRACUSE, N. Y. — Structural alterations and general repairs to the former Franklin automobile plant being converted for the manufacture of air-conditioning equipment by Carrier Corp. will cost an estimated \$75,000, according to permit records at the city hall here. An additional \$30,000 is being expended for a large crane runway.

#### Huntington Ballroom Cooled

HUNTINGTON, W. Va. — Emmons-Hawkins Co., Kelvinator distributor, will install a \$1,000 cooling system in Vanity Fair ballroom here.

### RANCO uses SYLPHON BELLOWS



in Thermostat Controls

A thermostat is no better than its bellows. That is why Rancostat depends on a Sylphon Bellows for its alert, responsive, dependable operation and long life.

So it is with many leaders in the refrigeration industry who have the greatest investment in product acceptance and good will. They insist on the time-tested superiority of this, the world's most highly developed metal diaphragm... backed by 35 years of experience in its correct application, and an intimate knowledge and appreciation of refrigeration thermostats' requirements. Write for Bulletin SO. Sent on request.

**FULTON SYLPHON CO.**  
KNOXVILLE TENN., U.S.A.  
Representatives in All Principal Cities in U. S. A. and in Montreal, Canada and London, England

### Residence Installations On Increase in Cities Studied in Surveys

(Concluded from Page 1, Column 3) with the first six months of 1936 were shown in nearly every case. Typical were the cases of Detroit, with 201 installations in six months this year to 69 in the same period last year; Chicago with 340 installations to 247; and Washington, D. C., with 86 installations for the first half of 1937 to 69 for the similar period last year.

Proportion of residential jobs to the total number of installations increased somewhat this year, but the amount of residential cooling being done is still rather on the insignificant side.

For the cities of Buffalo, New York City, and Rockford, Ill., a complete analysis of air-conditioning installations by the various classifications of market is not available. However, the figures on the total number of installations in these cities are as follows:

#### Buffalo

(Data Furnished by Buffalo Niagara & Eastern Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
77	3316	52	1882	33	834	152	6032	

#### Rockford, Ill.

(Data Furnished by Central Illinois Electric & Gas Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
7	63.5	16	67.56	34	212.24	57	343.3	

#### Sturtevant Opens Branch Office in Seattle

SEATTLE—Branch office of the B. F. Sturtevant Co., manufacturer of air-conditioning and ventilating equipment with headquarters in Hyde Park, Mass., has been established in suite 968 Stuart building here.

Douglas R. Stiehl is district manager of the new office. The Sturtevant Co., which has its main west coast office in Berkeley, Calif., recently installed air-conditioning equipment in the new University of Washington chemistry building here.

#### Condenser Water Sprayed Over Skylights

MILWAUKEE—Water discharged by the air-conditioning system of the Plankinton Building here is to be put to another cooling use before being discharged into sewers, A. J. Harvey, head of the building company, has announced.

Coming from deep wells, the water will be sprayed over skylights after doing its cooling job in the air-conditioning system. The water will be cool enough, when coupled with its evaporation, to make a noticeable difference in the comfort of the building.

#### Hartford, Conn.

(Data Furnished by Hartford Electric Light Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Beauty Parlors	1	7.0	0	0.0	1	2.5	2	9.5
Candy Mfg.	1	2.0	1	3.0	0	0.0	2	5.0
Cocktail Lounges	1	16.5	0	0.0	0	0.0	1	16.5
Department Stores	2	398.5	0	0.0	2	136.0	4	534.5
Furriers	1	34.5	0	0.0	0	0.0	1	34.5
Hospitals	2	8.0	0	0.0	2	2.25	4	10.25
Industrial	3	135.0	0	0.0	0	0.0	3	135.0
Offices	2	170.0	0	0.0	0	0.0	2	170.0
Office Buildings	6	11.0	3	2.0	5	14.0	14	27.0
Residences	2	3.0	1	3.0	0	0.0	3	6.0
Restaurants	5	53.5	4	40.5	4	31.33	13	125.33
Stores	1	15.0	3	16.5	1	3.33	5	34.83
Theaters	1	167.5	0	0.0	0	0.0	1	167.5
Funeral Homes	0	0.0	1	10.0	1	4.0	2	14.0
<b>Totals</b>	<b>28</b>	<b>1,021.5</b>	<b>13</b>	<b>75.0</b>	<b>17</b>	<b>193.41</b>	<b>57</b>	<b>1,289.91</b>

#### Kansas Electric Power Co. Territory

(Data Furnished by Kansas Electric Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Theaters	3	120.0	0	0.0	1	62.5	4	182.5
Hospitals	0	0.0	2	1.5	0	0.0	2	1.5
Offices	2	21.0	2	2.25	7	58.0	11	81.25
Restaurants	3	25.0	1	7.5	3	15.5	7	48.0
Stores	0	0.0	1	7.5	4	41.75	5	49.25
Beauty Parlors	0	0.0	2	10.0	1	9.5	3	19.5
Funeral Homes	2	15.0	0	0.0	2	12.0	4	27.0
Physicians' Offices	2	3.75	0	0.0	2	17.75	4	21.5
Institutions	1	100.0	1	1.5	0	0.0	2	101.5
Residences	5	13.25	3	3.75	0	0.0	8	17.0
<b>Totals</b>	<b>18</b>	<b>298.0</b>	<b>12</b>	<b>33.0</b>	<b>20</b>	<b>217.0</b>	<b>50</b>	<b>548.0</b>

#### Joe Parker Represents Rempe in the South

CHICAGO—Joe E. Parker has been appointed southern representative for Rempe Co., manufacturer of refrigeration and air-conditioning coils. His territory will include Virginia, North Carolina, South Carolina, Tennessee, Alabama, Georgia, Mississippi, and Florida.

Mr. Parker has been in the refrigeration field for the last several years, having been connected with Larkin Co., Atlanta and Chicago, and more recently with Refrigeration Appliances, Inc., Chicago.

#### Peoples Gas Co. Selling G-E Units in Chicago

CHICAGO — Peoples Gas, Light, and Coke Co. is to promote and sell General Electric gas-fired heating and air-conditioning equipment, according to an announcement made at a recent meeting here attended by officials and salesmen of the utility and the G-E air-conditioning department.

To inaugurate the arrangement, a "gas heat contest" featuring half-page advertisements in the Tribune was jointly sponsored by the utility and the local General Electric distributor, the Air Conditioning Corp. of Chicago.

For the contest, the city was divided into 25 districts, each worked by five utility salesmen and one distributor salesman.

#### New Central-Type Units Are Introduced by Herman Nelson

MOLINE, Ill.—A new series of gas burning air-conditioning furnaces has been announced by Herman Nelson Corp., manufacturer of air-conditioning equipment.

The new furnace is offered in three sizes—N-500, N-1000, and N-2000, with respective outputs of 100,000, 125,000, and 150,000 B.t.u. at the register.

Induced draft fans and logarithmic spacing of heat-catching fins both inside and outside the flue passages are said to provide positive discharge of spent flue gases and more uniform temperatures over the entire bonnet area.

All electrical parts are balanced and shielded to eliminate radio interference.

The new furnaces are also equipped with air-circulating fans and Dustop glass-wool filters. The spray-type humidifier operates only when the furnace is on and air is being circulated through the registers.

Cabinets of the new units are constructed of heavy-gauge furniture steel, insulated with cellular asbestos and aluminum foil, and finished in gray opalescent baked enamel and stainless steel.

Summer cooling and dehumidification may be included at the time of installation, or added later by simply installing a Herman Nelson cooling coil and condensing unit, the company reports.

# THE ANSUL TWINS

WERE READY TO GET IN THERE AND PITCH!

## Champions OF THE REFRIGERANT WORLD

**ANSUL CHEMICAL COMPANY**  
MARINETTE WISCONSIN

A CASTLE of Comfort in **DETROIT**

# BARLUM HOTEL

CADILLAC SQUARE AND BATES STREET

**810 OUTSIDE ROOMS**  
**\$2.50**  
FROM 2 DAILY  
ALL WITH BATH



## Atlanta and Vicinity

(Data Furnished by Georgia Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Barber Shops	2	9.0	0	0.0	1	5.5	3	14.5
Banks	2	7.33	3	33.16	2	21.0	7	61.49
Beauty Parlors	1	18.0	2	8.1	2	22.5	5	48.6
Candy Mfg.	0	0.0	1	3.05	0	0.0	1	3.05
Department Stores	8	1,410.0	4	1,707.66	0	0.0	12	3,117.66
Dress Shops	3	68.5	3	19.88	2	21.42	10	109.8
Drug Stores	3	59.0	3	56.0	2	6.0	8	121.0
Exhibits & Displays	6	76.5	1	25.0	0	0.0	7	101.5
5 & 10 Cent Stores	0	0.0	3	445.83	3	284.75	6	730.58
Funeral Homes	1	3.5	1	10.0	0	0.0	2	13.5
Fur Storage	0	0.0	1	21.5	3	11.0	4	32.5
Grocery Stores	1	4.0	0	0.0	0	0.0	1	4.0
Haberdasheries	1	15.0	3	25.5	4	267.67	8	308.17
Hospitals	3	8.0	0	0.0	2	38.0	5	46.0
Hotel Dining and Cocktail Rooms	2	218.0	4	54.37	3	108.62	9	380.99
Hotel Bedrooms	2	3.0	1	22.0	0	0.0	3	25.0
Jewelry Stores	0	0.0	2	10.25	2	29.38	4	39.63
Industrial	12	269.5	2	20.0	1	37.5	15	327.0
Market Spaces	0	0.0	1	8.0	0	0.0	1	8.0
Opticians	0	0.0	3	9.75	3	13.57	6	23.32
Printing Establishments	0	0.0	1	0.55	0	0.0	1	0.55
Private Offices	49	370.5	38	166.6	11	991.65	98	1,528.75
Radio Studios	0	0.0	1	2.5	2	6.41	3	8.91
Residences	27	92.75	14	28.4	2	9.83	43	130.98
Restaurants	23	449.0	5	69.0	1	11.75	29	529.75
Shoe Stores	2	20.0	3	27.25	5	16.16	10	63.41
Theaters	9	1,915.0	4	152.75	1	38.0	14	2,105.75
Wine & Liquor Stores	1	15.0	0	0.0	0	0.0	1	15.0
Totals	160	5,031.58	104	2,927.1	55	1,940.71	315	9,567.74

## St. Paul, Minn.

(Data Furnished by Northern States Power Co.)

Summer Air-Conditioning Installations Using Mechanical Refrigeration

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Restaurants	3	32.0	15	183.0	8	86.3	26	301.3
Bars	0	0.0	0	0.0	10	82.1	10	82.1
Theaters	0	0.0	1	6.0	0	0.0	1	6.0
Stores	5	34.0	2	6.0	3	23.3	10	63.3
Offices	20	69.0	8	26.0	3	6.5	31	101.5
Beauty Parlors	0	0.0	1	12.0	0	0.0	1	12.0
Funeral Homes	0	0.0	1	6.0	0	0.0	1	6.0
Hotels	0	0.0	2	24.0	0	0.0	2	24.0
Residences	24	14.0	15	31.0	1	2.0	40	47.0
Hospitals	0	0.0	1	3.0	0	0.0	1	3.0
Airplanes	0	0.0	1	2.0	0	0.0	1	2.0
Recreation Hall	0	0.0	0	0.0	1	18.0	1	18.0
Totals	52	149.0	47	299.0	26	218.2	125	666.2

Summer Air-Conditioning Installations Using Deep Well Water or City Water for Cooling Through Sprays or Counterflow Fin Type Coils

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Restaurants	1	10.0	3	31.0	6	56.8	10	97.8
Bars	0	0.0	0	0.0	5	27.0	5	27.0
Theaters	0	0.0	6	103.0	2	10.0	18	383.0
Stores	0	0.0	1	1.0	0	0.0	1	1.0
Offices	1	1.0	1	1.0	0	0.0	2	2.0
Barber Shop	0	0.0	0	0.0	1	1.5	1	1.5
Funeral Homes	0	0.0	1	4.0	1	1.8	2	5.8
Hotels	4	110.0	1	175.0	0	0.0	5	285.0
Churches	0	0.0	0	0.0	1	33.0	1	33.0
Public Buildings	2	50.0	0	0.0	0	0.0	2	50.0
Bank	1	50.0	0	0.0	0	0.0	1	50.0
Residences	0	0.0	4	1.0	0	0.0	4	1.0
Recreation Halls	0	0.0	0	0.0	2	26.5	2	26.5
Totals	19	491.0	17	316.0	18	156.6	54	963.6

## Minneapolis

(Data Furnished by Northern States Power Co.)

Summer Air-Conditioning Installations Using Mechanical Refrigeration

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Restaurants	9	45	9	109	16	139	34	293
Bars	0	0	0	0	19	104	19	104
Stores	8	39	12	145	19	423	39	607
Offices	29	233	15	74	5	194	49	501
Beauty Parlors	1	2	0	0	0	0	1	2
Mortuaries	1	3	0	0	0	0	1	3
Hotels	0	0	1	20	0	0	1	20
Factories	1	10	5	10	0	0	6	20
Churches	0	0	0	0	1	30	1	30
Public Buildings	0	0	1	28	0	0	1	28
Residences	16	34	33	72	0	0	49	106
Railroad Coaches	1	60	0	0	0	0	1	60
Totals	66	426	76	458	60	890	202	1,774

Summer Air-Conditioning Installations Using Deep Well Water or City Water for Cooling Through Sprays or Counterflow Fin Type Coils

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Restaurants	10	164	15	112	5	55	30	331
Bars	0	0	0	0	5	72	5	72
Theaters	29	463	7	108	2	25	38	596
Stores	10	195	3	42	3	505	16	742
Offices	5	51	6	274	1	25	12	350
Beauty Parlors	0	0	1	2	0	0	1	2
Mortuaries	5	22	1	3	0	0	6	25
Hotels	2	37	2	5	0	0	4	42
Churches	1	10	1	4	0	0	2	14
Public Buildings	2	119	0	0	0	0	2	119
Banks	2	16	0	0	0	0	2	16
Residences	34	9	8	2	0	0	42	11
Hospitals	0	0	2	1	0	0	2	1
Totals	100	1,056	46	553	16	682	162	2,321

## Miami, Fla. Area

(Data Furnished by Florida Power &amp; Light Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Apartment	1	2.06	0	0.0	0	0.0	1	2.06
Theaters	5	780.75	4	226.8	3	226.2	12	1,233.75
Restaurants, Bars, Cafes, Grills, etc.	7	102.05	3	79.5	3	44.3	13	225.85
Night Club	0	0.0	1	20.0	0	0.0	1	20.0
Club	0	0.0	0	0.0	1	13.8	1	13.8
Hotel Pantry	0	0.0	1	1.0	0	0.0	1	1.0
Hotel Rooms and Bar	0	0.0	1	26.5	0	0.0	1	26.5
General Offices	0	0.0	1	0.8	1	80.0	2	80.8
Private Offices	1	14.0	5	23.6	7	44.4	13	82.0
Department Stores	13	15.59	13	14.4	5	8.0	31	37.99
Retail Stores	3	172.0	3	276.2	0	0.0	6	448.2
Barber Shop	1	2.2	0	0.0	11	108.6	12	350.9
Beauty Parlors	3	36.25	0	0.0	0	0.0	3	36.25
Operating Rooms	1	5.75	1	0.7	0	0.0	2	6.45
Showrooms	2	19.5	0	0.0	0	0.0	2	19.5
Rest Room	1	2.05	0	0.0	0	0.0	1	2.05
Audition Room	1	0.55	0	0.0	0	0.0	1	0.55
Broadcasting Studio	1	24.85	0	0.0	0	0.0	1	24.85
Stock Exchange	1	3.21	0	0.0	0	0.0	1	3.21
Repair Shop	1	1.52	0	0.0	0	0.0	1	1.52
5 & 10 Cent Store	1	120.0	0	0.0	0	0.0	1	120.0
Projection Room	1	1.05	0	0.0	0	0.0	1	1.05
Court Room	1	38.0	0	0.0	0	0.0	1	38.0
Casino and Offices	1	324.0	0	0.0	0	0.0	1	324.0
Tailor's Shop	1	2.05	0	0.0	0	0.0	1	2.05
Private Yacht	0	0.0	1	0.8	0	0.0	1	0.8
Apparatus Room	0	0.0	2	10.0	0	0.0	2	10.0
Banks	1	25.75	2	49.2	0	0.0	3	74.95
Funeral Homes	2	16.7	1	0.8	0	0.0	3	17.5
Residences	9	21.68	28	73.0	3	6.5	40	101.18
Industrial Applications	2	7.7	3	6.5	4	94.0	9	108.2
Totals	67	1,804.64	84	986.7	38	625.8	189	3,417.14

## 51 Cooling Systems Sold in Chicago During August

CHICAGO—Contracts for 51 air-conditioning installations were closed here during August, setting a new all-time high for the month both in number and capacity of installations, according to reports from Commonwealth Edison Co.

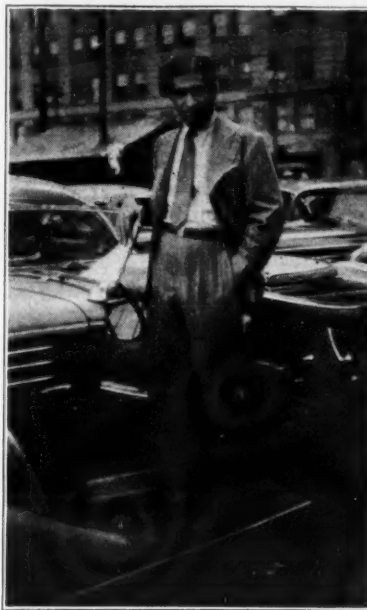
The new mark, an 89% increase over the 27 contracts closed here in August, 1936, pushed the total number of air-conditioning plants in service or contracted for in Chicago to 1,889.

Capacity of last month's installations totaled 430 hp., a gain of 78% compared with the 241 hp. reported in the same month last year. Twenty-eight contracts for room coolers were listed, an increase of 154% over the number of room coolers sold during August, 1936.

A classified list of air-conditioning contracts closed during August follows:

Private offices	16
General offices	7
Restaurants	6
Doctors' and dentists' offices	6
Drug stores	4
Residences	3
Hospitals	2
Fur stores	2
Bakeries	1
Theaters	1
Shoe stores	1
Clothing stores	1
Clubs	1

## Importer Here



Ahmed A. Fazelbhoj, Crosley distributor in Bombay India, is now touring the United States lining up distribution franchises for many specialty products. He spent four days in Detroit as a guest of the editor.

## Delco-Frigidaire Dealer Equips Baton Rouge Store

BATON ROUGE, La.—Standard Office Supply and United Service Co. has installed Delco-Frigidaire air conditioning in the new Maison-Rouge, ladies ready-to-wear store here.

## Holcomb and Hoke Names Outlets for 'FireTender' Line

INDIANAPOLIS—Appointment of several new distributors and dealers has been made by Holcomb & Hoke Mfg. Co. here for its line of "Fire-Tender" stokers.

New distributors are: Halliday-Rittenhouse and Leonard & Six, in Illinois; McCue Fuel Co., in Missouri; and Wilks Distributing Corp. in Michigan.

New dealers are: Geo. O. Wilson, Colorado; Oil Burner & Air Conditioning Corp., Maryland; W. M. Bailey, Virginia; Robinson Plumbing Shop, Michigan; Great Lakes Air Conditioning Corp. and Carpenter & Wehl, Ohio; Blauser, Rhode Island; J. W. Brooks & Sons, Tennessee; W. Liberty Lumber Co., Pennsylvania.

Banner Coal Co., Rekauf & Dagnon, General Appliance Sales Co., Benson Coal Co., Wisconsin; Windsor Heating Co., Birmingham & Copper, Logan Coal Co., Geo. Gildner, Joseph L. Kozick, E. J. Field Hdwe. Co., and W. R. Odell, Illinois; Smith & Snyder Coal Co., Iowa; J. J. Haselmire, Claude F. Stewart, and H. & H. Heating & Equipment Co., Indiana.

## Crouse Installs G-E Unit In South Bend Shop

SOUTH BEND, Ind.—E. W. Crouse Sales Co., Inc., installed General Electric air conditioning in Worth's, women's ready-to-wear store here.

ALL THREE

Visible Scales  
Close Differential  
Locking Device

Included with

## MINNEAPOLIS-HONEYWELL REFRIGERATION CONTROLS

ONLY Minneapolis-Honeywell Refrigeration Controls include all these features at no extra cost. There is a Minneapolis-Honeywell control available for every purpose, each selected to meet individual requirements of that particular job. The Minneapolis-Honeywell engineer in or near your city is available for consultation on any problem pertaining to refrigerating, air conditioning or comfort cooling. Call him in. There is no obligation. Minneapolis-Honeywell Regulator Co., 2807 4th Ave. S., Minneapolis, Minn.



MINNEAPOLIS-HONEYWELL  
Control Systems

BROWN INSTRUMENTS FOR INDICATING, RECORDING, CONTROLLING







## Greater St. Louis

(Compiled by Union Electric Co. of Missouri)

Classification	Prior		During 11		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Apartments & Residences	196	323.79	193	291.95	163	394.47	552	1,010.21
Apartment Houses	0	0.0	1	21.5	9	198.02	10	219.52
Banks	3	60.5	1	63.7	2	159.51	6	283.71
Barber & Beauty Shops	3	5.75	3	13.33	2	10.0	8	29.08
Brokers' Board Rooms	4	115.5	3	38.45	5	255.43	12	409.38
Clubs	4	126.0	4	140.81	1	56.0	9	322.81
Funeral Homes	8	110.43	3	72.0	11	171.39	22	353.82
Hospitals	1	0.4	5	12.37	2	3.83	8	16.6
Hotels, Guest and								
Public Rooms	15	624.38	4	458.87	16	2,114.5	35	3,197.75
Office Buildings	3	392.0	5	1,017.35	16	2,240.06	24	3,649.41
Offices	109	591.0	101	1,192.76	71	958.57	281	2,742.33
Restaurants and								
Liquor Dispensers	30	716.81	21	286.08	19	324.61	70	1,327.5
Sales & Display Rooms	25	110.31	11	41.63	10	71.27	46	223.21
Stores, Retail	50	1,007.7	47	2,159.06	43	559.23	140	3,725.99
Studios, Broadcasting and								
Other	0	0.0	3	136.84*	1	3.5	4	140.34
Theaters & Auditoriums	15	4,347.0	14	463.0	3	187.0	32	4,997.0
Miscellaneous	9	824.63	5	229.75	2	111.34	16	1,165.72
Industrial Applications	33	1,253.09	10	386.65	13	546.81	56	2,186.55
Totals	508	10,609.29	434	7,026.1	389	8,365.54	1,331	26,000.93

\*Dec. '36.

## Indianapolis and Vicinity

(Compiled by Indianapolis Power &amp; Light Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	1	45.25	0	0	0	0	1	45.25
Barber Shops and								
Beauty Shops	1	5.25	0	0	1	2	2	7.25
Churches	1	15	0	20.5	0	0	1	35.5
Club Rooms	1	11.5	0	2**	1	1	2	14.5
Funeral Homes	1	6.5	1	5.25	3	32	5	43.75
Hospitals	1	3.5	1	18	2	69.5	4	91
Industrial Applications								
Candy Manufacture	1	10	0	0	0	0	1	10
Dairy	2	27	0	0	1	10	3	27
Frozen Produce	0	0	0	0	1	10	1	10
Miscellaneous	3	440.5	0*	35	1	8	4	483.5
Laboratories	1	5.75	1	14	0	0	2	19.75
Libraries	0	0	1	15.25	0	0	1	15.25
Offices								
General	5	175	8	127.75	11	152.5	24	455.25
Private	10	18.5	22	18.67	11	10.6	43	47.77
Residences	21	54.75	28	35.75	11	12.75	60	103.25
Restaurants and Bars	18	343	6	96.25	5	98.5	29	537.75
Stores								
Dept. & Clothing	6	1,656.5	4	442	4	392	14	2,490.5
Confectionery	1	20	1	5.5	1	1.5	3	27
Fur	1	4.5	0	0	0*	10.5	1	15
Food	0	0	1	2.25	0	0	1	2.25
Jewelry	1	3	2	16.5	1	18	4	37.5
Shoe	0	0	1	5.75	3	29.25	4	35
Studios	1	2.5	1	3.75	2	9.5	4	15.75
Theaters								
Electric Refrigeration	2	610	0	0	1	25.5	3	635.5
Washed Air-Cooled	8	403.25	0*	10	0	0	8	413.25
Well-water System	0	0	0	0	9	223	9	223
Totals	87	3,861.25	79	874.17	68	1,106.1	234	5,841.52

\*Indicates addition to present system.  
 \*\*Indicates addition to other sections of location.  
 †Indicates a replacement.  
 ‡Plus two additions to present systems.  
 §Plus one addition to present system.

## Pittsburgh

(Compiled by Duquesne Light Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	1	500	0	0	0	0	1	500
Barber Shops	2	14	1	2.50	0	0	3	16.50
Beauty Shops	4	55.50	2	8.50	2	17.50	8	81.50
Combination Barber and								
Beauty Shop	1	18	0	0	0	0	1	18
Clubs, Restaurants								
and Tap Rooms	1	7	1	1	2	5.50	4	13.50
Guest Rooms	0	0	1	.75	1	.75	2	1.50
Other Places	0	0	0	0	1	9	1	9
Candy Stores	0	0	10	16	4	9.50	14	25.50
Dairy Stores	4	29	0	0	0	0	4	29
Department Stores	1	590	1	1,115	2	1,905.50	4	3,610.50
Drug Stores	0	0	0	0	6	55.75	6	55.75
Funeral Parlors	1	7	3	18	2	14.50	6	39.50
Hospitals	0	0	2	1.50	1	5.50	3	7
Hotels								
Coffee Shops & Dining								
Rooms	3	73	4	210	3	50	10	333
Tap Rooms	2	25	5	77	0	0	7	102
Ballrooms	1	30	0	0	0	0	1	30
Guest Rooms & Offices	4	4	1	1	0	0	5	5
Offices (Gen. & Private)	50	172.75	29	192	30	216.25	109	581
Offices (Doctor's)	8	9.75	4	5.75	6	4.25	18	19.75
Residential	37	46.25	26	41.50	19	31.25	82	119
Restaurants & Cafeterias	19	574.50	10	172.50	11	177	40	924
Stores (Misc.)	24	232.75	9	384.50	19	277.25	52	894.50
Theaters	9	2,547	2	78	9	389.50	20	3,014.50
Industrial	10	609	4	33.50	3	21.50	17	664
Miscellaneous	3	69	3	11	4	329.50	10	409.50
Totals	185	5,613.50	118	2,370	125	3,550	428	11,533.50

## Kansas City, Mo.

(Data Compiled by Kansas City Power &amp; Light Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Bakeries	3	71.0	0	0.0	0	0.0	3	71.0
Banks	3	14.75	5	127.50	2	7.50	10	149.75
Beauty Shops	5	66.25	3	32.25	6	38.0	14	136.50
Buildings	4	2,792.0	0	0.0	4	421.50	8	3,313.50
Drug Stores	5	130.0	2	52.0	2	40.0	9	222.0
General Offices	39	323.75	24	416.75	37	578.0	100	1,318.50
Hospitals	10	11.50	8	50.75	2	44.50	20	106.75
Hotels	11	461.0	4	240.50	3	420.0	18	1,121.50
Miscellaneous	8	93.25	5	171.25	10	97.75	27	362.25
Mortuaries	8	54.50	9	106.0	3	77.0	16	237.50
Restaurants & Night Clubs	32	753.50	21	232.50	16	145.0	69	1,131.0
Salesrooms and Shops	32	864.50	16	533.0	16	1,032.50	64	2,430.0
Theaters	23	1,870.0	0	0.0	0	0.0	23	1,870.0
Private Offices	32	38.25	36	53.0	11	28.0	79	119.25
Residences	133	327.75	101	191.75	50	140.25	284	659.75
Totals	348	7,878.0	234	2,207.25	162	3,170.0	744	13,249.25

## El Paso, Texas

(Data Compiled by El Paso Electric Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Theaters	5	307.5	1	15.0	1	75.0	7	397.5
Shoe Stores	0	0.0	1	7.5	1	10.0	2	17.5
Grocery Stores	1	3.0	2	10.0	0	0.0	3	13.0
Drug Stores	0	0.0	3	44.0	1	7.5	4	51.5
Office Buildings	0	0.0	1	20.0	1	15.0	2	35.0
Residences	4	6.0	2	4.0	454	155.0	460	165.0
Hospitals	0	0.0	1	20.0	0	0.0	1	20.0
Offices	4	32.0	1	1.5	2	3.0	7	36.5
Retail Stores (Automobile,								
Clothing, Jewelry)	1	20.0	1	10.0	4	73.0	6	103.0
Cocktail Bars	0	0.0	1	12.0	1	12.0	2	24.0
Cleaning Establishments	0	0.0	1	4.0	1	3.0	2	7.0
Utilities	2	50.0	0	0.0	1	17.0	3	67.0
Hotels	2	92.0	0	0.0	0	0.0	2	92.0
Funeral Homes	2	20.5	0	0.0	0	0.0	2	20.5
Bowling Alleys	1	30.0	0	0.0	0	0.0	1	30.0
Night Clubs	1	15.0	0	0.0	0	0.0	1	15.0
Newspapers	0	0.0	0	0.0	1	10.0	1	10.0
Gymnasium	0	0.0	0	0.0	1	7.5	1	7.5
Totals	23	576.0	15	148.0	469	388.0	507	1,112.0

\*Note: These figures include all air washing and dry evaporative cooling.

## THE BUYER'S GUIDE



## Californians Know A Good Thing When They See It—

So the butchers out there are taking the Peerless Flash Cooler to their hearts like a long lost brother.

Here is Butcher Morales of San Diego who is happy as a boy with a new toy over the installation of a new Flash Cooler in his store. He's telling Jim Noell, manager of Peerless' Pacific Coast factory, just how well pleased he is.

The wide, shallow coil of the Flash Cooler delivers a large volume of properly cooled air, not too cold, not too warm. The multi-louvered drip pan directs the cold air dropping off the coil into its proper channels for most effective circulation. The Flash Cooler is a complete unit, including hangers, coil and drip pan, ready to install.

You do yourself a favor every time you sell a Flash Cooler.

## PEERLESS of AMERICA, Inc.

ESTABLISHED IN 1912 AS THE PEERLESS ICE MACHINE COMPANY  
 New York Factory Main Factory—General Offices Pacific Coast Factory  
 43-20 34th Street 515 West 35th Street 3000 S. Main Street  
 Long Island City Chicago Los Angeles  
 PEERLESS JOBBERS IN ALL PRINCIPAL CITIES

BUY PEERLESS FOR PERFORMANCE

**ASK YOUR JOBBER**

— or write **TODAY for**

**BULLETIN 701**

**Ranco** INC  
COLUMBUS, O.

# Ranco

## CONTROLS

**MORE EXACT REPLACEMENTS THAN ANY OTHER LINE!**

CAT. NO. K-99H

## KASON

### Drop-Shelf BRACKET

This bracket is popularly used to provide cutting boards and wrapping counters for refrigerated display cases. It is attached onto the back of the case and so permits the clerk to face the customer uninterrupted while serving. Will support 100 lbs. weight and a shelf up to 10 inches wide.

This and numerous other items of supplementary hardware for the refrigerator are presented in section "D" of new catalog No. 38 now ready for distribution.

**KASON HARDWARE CORPORATION**  
127-137 Wallabout Street, Brooklyn, New York

There's big money in the Koch line for properly qualified distributors. If your territory is not already covered, send in your application. Attractive financing plan. Exceptional cooperation from factory.

**HE MADE \$20,000.00 IN 2 YEARS**

**THE NEW ECON-O-CASE IS A MONEY-MAKER**

**SELLING KOCH PRODUCTS**

The Koch line is complete, including both porcelain and Dulux finished display cases, refrigerators, and walk-in coolers. Koch manufactures all types of refrigerated fixtures for markets, restaurants, bakers, florists, hospitals and other institutions.

**KOCH REFRIGERATORS**  
NORTH KANSAS CITY, MO.  
Export Dept. 204 E. 45th St. N. Y. City

## COMPLETE AND MODERN

**LINES OF COMMERCIAL HARDWARE FOR EVERY APPLICATION**

**GRAND RAPIDS BRASS COMPANY**  
GRAND RAPIDS, MICHIGAN



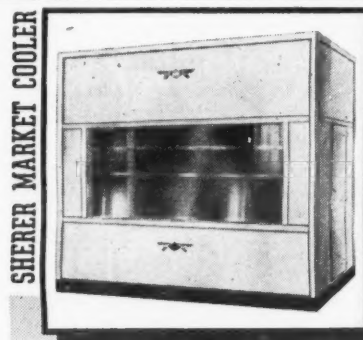
## Rochester, N. Y.

(Compiled by Rochester Gas and Electric Corp.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Industrial	12	22,285	3*	1,257.75	5*	1,886.75	14	25,429.5
Office Buildings	1	188	1*	40	2*	72	2	300
Offices	8	75.5	4*	14	5*	9.75	17	99.25
Theaters	4	1,274	0	0	1*	50	5	1,324
Restaurants	7	187.5	8	113.75	1*	16.5	8	317.75
Hotels	3	79	0	0	0	0	3	79
Stores	7	425.25	6	156.25	8*	74.75	20	656.25
Radio Studios	1	4	0	0	1*	9	1	13
Libraries	1	265	0	0	0	0	1	265
Banks	4	118.75	1	50.75	0	0	5	169.50
Funeral Homes	0	0	1	3.5	0	0	1	3.5
Newspapers	1	112.75	0	0	1	57	2	169.75
Telephone Exchanges	2	32.75	3*	44.5	1*	9	3	86.25
Residences	11	21.25	10	17.5	2	4.5	23	43.25
Hospitals	0	0	1	1	0	0	1	1
Municipal Buildings	0	0	1	3.75	0	0	1	3.75
Beauty Parlors and Barber Shops	0	0	0	0	2	31.5	2	31.5
<b>Totals</b>	<b>62</b>	<b>25,068.75</b>	<b>39</b>	<b>1,702.75</b>	<b>29</b>	<b>2,220.75</b>	<b>109</b>	<b>28,992.25</b>

\*One or more of these installations is an addition to previous equipment.

## THE BUYER'S GUIDE



## SHERER

## REFRIGERATED EQUIPMENT

Our 1937 line offers extraordinary profit opportunities for refrigeration dealers. Your opportunity for sales to meat markets, food stores, restaurants, bakeries, etc., is greatest with the SHERER line. Write for details about the Sherer Case and Cooler Franchise . . . there are still desirable territories available.

SHERER-GILLET CO. MARSHALL MICHIGAN

DISPLAY AND STORAGE EQUIPMENT FOR RETAIL FOOD STORES



## TYLER'S WELDED STEEL Cases

1937 line offers wide variety and sensational values. 6 big new features and iron-clad guarantee. Only Tyler gives one-piece "welded steel" construction, 100% insulation. Wonderful sales opportunity. Most talked of and fastest selling line on market. WRITE today.

TYLER Sales-Fixture COMPANY Dept. E, NILES, MICHIGAN

## SIX BIG NEW FEATURES



## CAPACITY!—You Get It Here!

When you buy a refrigerator, you're interested largely in CAPACITY—and there's no cabinet today which offers so much storage space for so little cost as the Model No. 350.

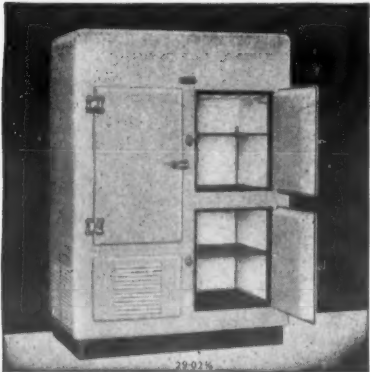
THIRTY CUBIC FEET OF STORAGE—enough room for 14 cases of beverage—and yet, the No. 350 Refrigerator occupies but 9 sq. ft. of floor space.

The No. 350 Refrigerator comes with solid or glass display type doors in top section; your choice, too, of long wearing DuLux, or gleaming white Porcelain, chrome trimmed.

Write for Folder 350, with complete details.

GLOEKLER MANUFACTURING COMPANY ERIE, PENNSYLVANIA

SALES OFFICE, 124 FOURTH AVENUE, PITTSBURGH



## Streamlined Beauty THIS LINE SELLS ON SIGHT

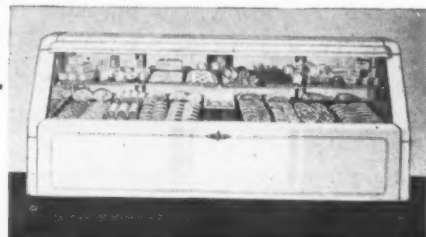
Weber brings the result of 35 years of successful manufacturing experience . . . America's most beautiful line of Refrigerator Cases and Commercial Cabinets. Exclusive territories now open—Complete financing plan

Established 1902 Cable Address "Weberco."

WEBER SHOWCASE &amp; FIXTURE CO., INC.

5700 Avalon Boulevard

Los Angeles



The HOLCOMB &amp; HOKE

## NEW DEALER PLAN—

offers you an exclusive franchise which includes a complete line of Dulux and porcelain cases—market coolers and boxes . . . priced to meet all competition.

Our New Dealer Finance Plan advances you more cash per sale.

We furnish the products and finance the sales.

All We Ask You to Do Is SELL!

Write, Wire or Phone At Our Expense for Full Particulars.

HOLCOMB &amp; HOKE MFG. CO. 1545 E. Van Buren St. Indianapolis, Indiana

## Columbia Offers 2 Evening Courses in Air Conditioning

NEW YORK CITY—Two evening extension courses in air conditioning are being offered during the winter and spring sessions of 1937-1938 by the department of architecture of Columbia university in cooperation with the department of mechanical engineering.

First course, Architecture e51 or e52R—Air Conditioning I, is a study of steam-air mixtures with relation to comfort cooling and commercial air conditioning. Comfort cooling calculation and general study of equipment and design will be covered in the course, as will a comparative analysis of refrigeration equipment and refrigerants used in connection with air conditioning.

Instruction in the course will be given by Robert W. Waterfall, director of Buensod-Stacy Air Conditioning, Inc., Westinghouse distributor in New York City.

Second course, Architecture e53 or e54R—Air Conditioning II, is concerned with quantitative relations on performance of elements of air-conditioning equipment and on installation assemblies in buildings.

Thermodynamics, heat transfer, and fluid dynamics applied to heating, cooling, humidifying, dehumidifying, and air movement, and to instruments or controls will be considered in the course, together with their application to typical commercial equipment and building installations.

The course is arranged to meet the needs of those concerned with sales, installation, or design of particular equipment or complete installations. It deals with the fundamental principles involved, and develops the theory and practice of design and practical operation as applied to parts of systems and complete layouts.

Instruction will be given by Claude A. Bulkeley, chief engineer of Niagara Blower Co. Registration in the course is limited to qualified applicants, subject to approval of the instructor.

Fee for the course is \$30 each, either session. First course is given from 7:45 to 9 p.m., Tuesday and Friday, and second from 8:25 to 9:40 p.m., Monday and Thursday, beginning Sept. 23, 1937, and Feb. 3, 1938.

## Hexcel Markets New Humidifier Model

RACINE, Wis.—Hexcel Radiator Co. has placed on the market its new Hexcel "Aristocrat" humidifier, a compact unit resembling a table-type radio, cased in two-tone walnut wood, designed to harmonize with modern home furnishings.

The unit is of the vapor type, generated by a heating element. It will emit in the form of vapor 1.2 pints of water per hour. It is so designed that the whole mechanism is inserted in the cabinet from the rear, making for easy servicing. The water compartment holds 3½ gallons of water, and a shut-off automatically stops current when the water supply is exhausted.

The humidifier is 18½ inches high, 14½ inches wide, and 12 inches deep, and weighs 27 lbs. It can be easily carried by handles on the sides, and operates on either alternating or direct current.

List price of the unit is \$37.50.

## Cincinnati

(Compiled by Cincinnati Gas &amp; Electric Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Residential	71	109.75	70	100.75	42	63	183	273.50
Offices	78	930.25	38	582.25	31	431.75	147	1,944.25
Small Stores	24	348.50	21	183.75	14	94.50	59	626.75
Large Stores	8	1,924	1	82	6	824	15	2,830
Restaurants	25	715.50	26	366.50	12	143	63	1,825
Theaters	16	2,118	8	290	7	188	31	2,596
Miscellaneous	23	1,840.25	8	77.75	6	83.50	37	2,011.50
<b>Totals</b>	<b>245</b>	<b>7,986.25</b>	<b>172</b>	<b>1,693</b>	<b>118</b>	<b>2,427.75</b>	<b>535</b>	<b>12,107</b>

## Akron, Ohio

(Compiled by Ohio Edison Co., Akron Division)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Candy Company	1	5	0	0	0	0	1	5
Clubs	0	0	0	0	3	51.29	3	51.29
Department Stores	1	.5	0	0	0	0	1	.5
Executive Offices	2	.5	0	0	0	0	2	.5
Funeral Parlors	0	0	1	7	1	16.5	2	23.5
Hotels	0	0	0	0	0	0	0	0
Coffee Shop, Dining Room, Barber Shop	1	75	0	0	0	0	1	75
Guest Room	0	0	1	1	0	0	1	1
Residences	3	3.5	3	1.75	1	3	7	8.25
Restaurants	3	38	4	43.9	5	49.25	12	131.15
Stores	2	23.5	0	0	0	0	2	23.5
Shoe	3	26.25	3	46	0	0	6	72.25
Clothing	1	.5	0	0	0	0	1	.5
Fur	1	6	0	0	0	0	1	6
Music Store	0	0	1	5.5	0	0	1	5.5
Dairy Store	0	0	0	0	1	2	1	2
Optical Store	0	0	0	0	1	26	1	26
Jewelry Store	0	0	0	0	1	7.5	1	7.5
Beauty Shop	3	11	6	20.5	1	1.25	10	32.75
Offices	2	560	1	30	2	209	5	7.9
Theaters	1	25	2	20	0	0	3	45
Miscellaneous	1	25	2	20	0	0	3	45
<b>Totals</b>	<b>24</b>	<b>714.75</b>	<b>22</b>	<b>175.65</b>	<b>16</b>	<b>365.79</b>	<b>62</b>	<b>1,256.19</b>

## Newark and Vicinity

(Compiled by Public Service Electric and Gas Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Theaters	17	3,756	1	150	1	23	19	3,929
Banks	6	474	2	50.5	10	114	10	1,070
Offices	39	366.9	12	153	10	114	61	633.9
Restaurants	21	345.6	13	224.8	12	221.2	46	791.6
Stores	27	327.4	32	552.2	34	443.9	93	1,323.5
Tap Rooms & Bars	3	16	3	68.5	2	16.5	8	101
Funeral Parlors	7	69.2	4	29	3	12	14	110.2
Residences	35	88.8	7	23.5	3	7.5	45	119.8
Beauty Parlors	1	10.2	2	6	3	10.7	6	26.9
Hospitals	0	0	2	142.5	0	0	2	142.5
<b>Totals</b>	<b>156</b>	<b>5,454.1</b>	<b>78</b>	<b>1,400</b>	<b>70</b>	<b>839.8</b>	<b>304</b>	<b>8,248.4</b>

## Manchester, N. H.

(Compiled by Public Service Co. of New Hampshire)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	0	0	0	0	1	31.25	1	31.25
Theaters	2	26.45	1	23	0	0	3	49.45
Offices	2	19	0	0	0	0	2	19
Restaurants	1	8.5	2	1.75	2	2.75	5	13
Industrial	3	4.75	1	22	0	0	4	26.75
Residence (room cooler)	0	0	0	0	1	1.50	1	1.50
<b>Totals</b>	<b>8</b>	<b>58.7</b>	<b>4</b>	<b>46.75</b>	<b>4</b>	<b>35.40</b>	<b>16</b>	<b>139.95</b>

## St. Joseph, Mo.

(Compiled by St. Joseph Railway, Light, Heat and Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Hotels	2	35	1	28	0	0	3	36
Industrial	1	40	1	15	0	0	2	55
Theaters	2	140	0	0	0	0	2	140
Stores	4	17.5	7	96	5	399	16	512.5
Funeral Homes	2	20	0	0	0	0	2	20
Beauty Parlors	1	3	2	8.33	2	7	5	18.33
Residences	5	4.75	6	9.37	0	0	11	23.12
Banks	1	1	0	0	0	0	1	1
Dept. Stores	0	0	1	65.5	1	52	2	137.5
Furriers	0	0	1	5.5	0	0	1	5.5
Offices	0	0	2	2.25	3	3.75	5	6
Restaurants	0	0	3	27.58	0	0	3	27.58
Drug Stores	0	0	1	13.5	0	0	1	13.5
Clubs	0	0	0	0	1	19	1	19
<b>Totals</b>	<b>18</b>	<b>261.25</b>	<b>25</b>	<b>269.03</b>	<b>18</b>	<b>489.75</b>	<b>61</b>	<b>1,015.03</b>

## Richmond, Va.

(Compiled by Virginia Electric and Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Restaurants	10	186.5	6	118.5	3	23	19	328
Theaters	16	1,730	5	194.5	6	181	27	2,105.5
Stores	26	2,019.5	20	690.8	9	104	55	2,814.3
Offices	19	81.8	13	63.3	8	68	40	213.1
Beauty Parlors	2	16	1	6	3	17	6	29
Funeral Homes	3	60	1	6	1	10	5	76
Hotels	0	0	0	0	0	0	0	0
Factories	6	650	0	0	1	104	7	754
Churches	0	0	1	6	0	0	1	6
Banks	1	60	0	0	1	9	2	69
Residences	23	50.5	9	17.5	7	7	39	75
Railroad Coaches	0	0	1	50	0	0	1	50
Hospitals	5	21	1	15	1	7	7	43
Miscellaneous	2	133.5	1	5.5	0	0	3	139
<b>Totals</b>	<b>113</b>	<b>5,008.8</b>	<b>59</b>	<b>1,173.1</b>	<b>40</b>	<b>540</b>	<b>212</b>	<b>6,721.9</b>

## SPECIFICATIONS—ALL MODELS—ALL MAKES

## 1937 DATA TO



**Houston, Texas**

(Data Furnished by Houston Lighting &amp; Power Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	4	607.5	0	0	0	0	4	607.5
Barber Shops	2	6.25	2	22	3	15.7	7	43.95
Beauty Parlors	1	16.5	1	4	3	12.8	5	33.3
Churches	0	0	1	21	1	47	2	68
Hospitals	1	18	2	21.5	0	0	3	39.5
Mortuaries	2	12.5	0	0	0	0	2	12.5
Offices	25	1,916	27	180.4	57	809.4	109	2,905.8
Studios	2	20	0	0	1	7	3	27
Residences	19	73.9	28	93.25	24	106.3	71	273.45
Restaurants & Clubs	14	1,045.2	9	127.50	9	141.4	32	1,314.1
Stores	26	1,059	0	0	0	0	26	1,059
Clothing	0	0	5	309	11	579	16	888
Grocery	0	0	3	124.5	5	168	8	292.5
Drug	0	0	4	68.5	2	37.5	6	106
Other	0	0	6	294	6	42	12	336
Theaters	10	1,940	1	125	2	137.5	13	2,202.5
Industrial	0	0	0	0	3	72.5	3	72.5
<b>Totals</b>	<b>106</b>	<b>6,714.85</b>	<b>89</b>	<b>1,390.65</b>	<b>127</b>	<b>2,176.1</b>	<b>322</b>	<b>10,281.6</b>

**Charleston, S. C.**

(Data Furnished by South Carolina Power Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Retail Stores	1	160.5	2	134.5	1	9.25	4	304.25
Restaurants	1	13	0	0	1	9	2	22
Department Stores	0	0	0	0	1	93	1	93
Utility Co.	0	0	0	0	1	20.75	1	20.75
Residential	0	0	0	0	2	7.75	2	7.75
Hotel (Including Dining Room)	1	10	0	0	0	0	1	10
Commercial Office	0	0	0	0	1	3.75	1	3.75
<b>Totals</b>	<b>3</b>	<b>183.5</b>	<b>2</b>	<b>134.5</b>	<b>7</b>	<b>143.5</b>	<b>12</b>	<b>461.5</b>

**Hammond & East Chicago, Ind.**

(Data Furnished by Northern Indiana Public Service Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Offices	2	28	2	25.5	1	3.3	5	56.8
Residences	0	0	1	3.33	1	3.66	2	6.99
Restaurants	1	42.5	0	0	2	13.5	3	56
Stores	0	0	0	0	3	111	3	111
Theaters	2	270	0	0	1*	35	3	305
<b>Totals</b>	<b>5</b>	<b>340.5</b>	<b>3</b>	<b>28.83</b>	<b>8</b>	<b>166.46</b>	<b>16</b>	<b>535.79</b>

\*Part well water.

**Des Moines, Iowa**

(Compiled by Des Moines Electric Light Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Theaters	5	378.25	9	216.5	2	135	16	729.75
Hotels (Dining Room only—no Guest Rooms)	4	146	4	92	0	0	8	238
Restaurants	21	186.25	5	94.3	8	35.13	34	315.68
Apparel Shops	5	53.4	0	0	2	10.75	7	64.15
Dept. Stores	0	0	1	1,111*	1	79	2	1,275
Offices	28	86.5	15	290	14	201.81	57	578.36
Radio Studios	1	15	1	28.8	0	0	2	43.8
Residences	15	29.5	17	21.33	7	14.73	39	66.06
Federal Homes	5	42.3	1	5.5	0	0	6	47.8
Stores (Exclusive of Apparel Dept.)	5	159.5	9	363	8	129.3	22	651.6
Industrial Dept.	2	37.5	1	1	0	0	3	38.5
Railway Yds. (for cars in yards)	1	80	0	0	0	0	1	80
Barber & Beauty Shops	2	6.5	2	3.5	3	23.12	7	33.12
Office Bldgs.—Complete	0	0	0	0	3	951.5	3	951.5
Banks	0	0	0	0	1	50.66	1	50.66
Sport Clubs	0	0	1	1.5	2	48	3	49.5
Hospitals	0	0	3	17.33	0	0	3	17.33
<b>Totals</b>	<b>95</b>	<b>1,306</b>	<b>69</b>	<b>2,245.76</b>	<b>51</b>	<b>1,679.05</b>	<b>214</b>	<b>5,230.81</b>

\*Same store.

**Beaumont, Texas**

(Compiled by Gulf States Utilities Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Residences	3	35.5	2	41.5	1	2.66	6	79.66
Restaurants	3	91.5	3	54	0	0	6	145.5
Offices	1	8	0	0	1	4	2	12
Theaters	2	261	2	193	0	0	4	454
Dry Cleaners	1	8	0	0	0	0	1	8
Retail Stores	1	8	2	32	4	34.33	7	74.33
Air Conditioning Dealer	1	14	0	0	0	0	1	14
Department Stores	1	29	0	0	0	0	1	29
Federal Court Room	1	12	0	0	0	0	1	12
Offices & Sales Room	2	105	0	0	1	13.5	3	118.5
Barber Shop	1	5	0	0	0	0	1	5
Bank	0	0	1	85	1	18.5	2	103.5
County Court House	0	0	1	118	0	0	1	118
City Auditorium	0	0	1	263	0	0	1	263
Drug Stores	0	0	0	0	2	36.5	2	36.5
Hotels	0	0	0	0	1	98	1	98
Night Clubs	0	0	0	0	1	25	1	25
<b>Totals</b>	<b>17</b>	<b>577</b>	<b>12</b>	<b>786.5</b>	<b>12</b>	<b>232.49</b>	<b>41</b>	<b>1,595.99</b>

**Racine, Wis.**

(Data Furnished by Wisconsin Gas &amp; Electric)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Industrial Application	0	0	0	0	1	120	1	120
Offices	0	0	0	0	1	1.33	2	2.83
Private	1	1.5	0	0	1*	120	1	120
General	0	0	0	0	1	1.5	3	5.5
Residences	0	0	2	4	1	5	3	5
Store (Clothing)	0	0	0	0	1	5	1	5
<b>Totals</b>	<b>1</b>	<b>1.5</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>247.83</b>	<b>8</b>	<b>253.33</b>

\*Sold, but not yet installed.

**San Francisco's Old Cliff House Rebuilt & Air Conditioned**

SAN FRANCISCO—Cliff House, famous for the last 80 years as a resort located near the Golden Gate, recently has been rebuilt and remodeled and equipped with air conditioning.

The resort is located on a cliff overhanging the Pacific ocean and the Seal Rocks. The Farallone Islands, 30 miles away, are visible from its windows. Ship lanes for all the passenger and freight boats are close to the restaurant's sea-facing side.

Costing \$7,500, the air-conditioning system provides automatic control of temperature, humidity and air circulation. Equipment was installed by The Frank Edwards Co., representative of the General Electric Air Conditioning Co., San Francisco.

Location of Cliff House subjects it to the changing climatic moods of the coast. For a few hours of the day semi-tropical sun heat may beat upon it. Within a few hours the cold ocean breezes may lower the outside temperature so that fires are needed in the open hearths.

Late afternoons may bring about another deeper chill, and heavy fogs.

With the air-conditioning system installed, this climate variance, that tended to cut off trade, is no longer effective, the management claims.

**Kelvinator Holds Sales Meetings for Heating Outlets in South**

DETROIT—Distributors and dealers of Kelvinator automatic heating equipment in the territories surrounding Birmingham, Ala., Knoxville, Tenn., and Charlotte, N. C., recently met at regional sales conferences held in these key cities to hear sales plans outlined for the fall and winter campaign.

Featured speakers at the meetings were two Kelvinator executives from the home office at Detroit, E. L. Sylvester, sales manager of the residential air-conditioning and automatic heating department, and V. E. Watkins.

**New Seattle Dealer Sells Norge Air Conditioning**

SEATTLE—Watts-Norge, Inc., a new firm selling air-conditioning and heating equipment, has been established at 2134 Westlake Ave. here by W. A. Watts, who has been active in the heating and electrical field for 15 years.

Larry Coman has been appointed sales manager of the new firm, and George Cross is superintendent of installations.

**Hal Holmyard Joins Florida Airtemp Distributor**

MIAMI, Fla.—Hal Holmyard, formerly of Cincinnati, has joined George Baker and Associates, Inc., as secretary and treasurer, according to George Baker, president. The firm is southeast Florida distributor for Chrysler Airtemp air conditioning and automatic heating.

**Cafe Air Conditioned**

ARCADIA, Calif.—Delco-Frigid-air air conditioning has been installed in the Pines cafe here.

**Milwaukee County, Wis.**

(Data Furnished by The Milwaukee Electric Railway and Light Co.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Residential (Private Homes)	14	29.6	5	12.2	4	4	23	45.8
Banks	1	72.5	0	0	0	0	1	72.5
Beauty Parlors	0	0	1	17.75	1	3.8	2	21.55
Funeral Homes	5	55	3	30.5	0	0	8	85.5
Hotel Coffee Shops and Dining Rooms	0	0	2	86	4	150	6	236
Offices	2	2	0	0	0	0	2	2
Doctors' & Dentists' General	11	556.6	6	75.3	4	125.5	21	757.4
Utility Co.	1	64	0	0	0	0	1	64
Restaurants	5	141	1	17	2	103.5	8	261.5
Self-Contained Units	3	2.5	9	8.4	5	4.3	17	15.2
Stores	2	190	2	294	1	252.5	5	736.5
Department	6	79	5	56.8	11	323.5	22	459.3
Studios, Broadcasting	0	0	1	10	0	0	1	10
Theaters	8	2,142	0	0	0	0	8	2,142
Miscellaneous Commercial	7	149.5	1	23	0	0	8	172.5
<b>Totals</b>	<b>65</b>	<b>3,483.7</b>	<b>36</b>	<b>630.95</b>	<b>32</b>	<b>967.1</b>	<b>133</b>	<b>5,081.75</b>

**Syracuse, N. Y.**

(Data Furnished by Niagara Hudson Public Service Corp.)

Classification	Prior		During 1936		First 6		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Funeral Home	0	0.0	1	18.0	0	0.0	1	18.0
Industrial Applications	0	0.0	1	12.0	0	0.0	1	12.0
Bakery	1	19.0	0	0.0	0	0.0	1	19.0
Candy Manufacturing	2	51.0	0	0.0	1	8.0	3	59.0
Fruit Processing	1	152.5	0	0.0	0	0.0	1	152.5
Printing Establishment	1	31.75	0	0.0	0	0.0	1	31.75
Office Building	4	4.0	2	3.33	1	5.0	7	12.33
Offices	0	0	1	1.75	2	4.0	3	5.75
Residences	1	60.0	5	146.5	3	52.5	9	259.0
Restaurants & Bars	6	159.5	7	82.0	8*	84.2	21	325.7
Stores, Dept. & Retail	1	3.25	0	0.0	0	0.0	1	3.25
Studio, Broadcasting	4	825.0	0	0.0	1	40.0	5	865.0
Theaters	1	3.25	0	0.0	0	0.0	1	3.25
<b>Totals</b>	<b>21</b>	<b>1,306.0</b>	<b>17</b>	<b>263.58</b>	<b>16</b>	<b>193.7</b>	<b>54</b>	<b>1,763.28</b>

\*Plus one addition to present system.

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**CORDLEY Electric WATER COOLERS**

**TYLER'S WELDED STEEL REACH-IN BOX**

**SALES SENSATION OF 1937**

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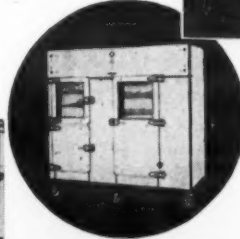
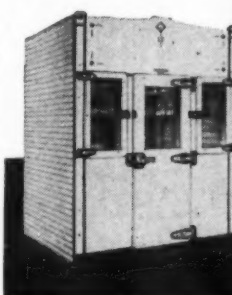
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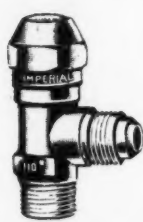
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For Mechanical Refrigeration Only





## THE BUYER'S GUIDE



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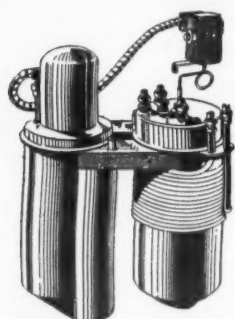
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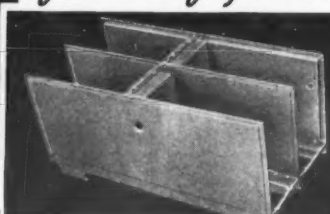
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Modernize old equipment... provide much greater storage space for packaged goods... eliminate brine leaks and attendant odors... reduce weight and simplify installation... require a minimum of service... provide ideal temperatures under all conditions... cost less to operate... quickly and easily installed in any standard cabinet at small cost.

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Special fittings made to order.

Commonwealth fittings are correctly designed, carefully machined, and tube seats are protected in shipping.

25 years of service to the industry.

## COMMONWEALTH BRASS CORPORATION

Commonwealth at Grand Trunk R. R.  
DETROIT, MICH.

## 2 Management Firms Announce Merger

CHICAGO — Merger of two management engineering companies, Hadar Ortman & Associates and McClure, Hadden & Swisher, has been announced by officials of the new firm of Ortman, McClure, Hadden & Co., with headquarters at 111 West Washington St.

The new company is taking over the management engineering and trade association accounts of the two merging companies among which are included the National Refrigeration Supply Jobbers' Association, and the Refrigeration Supplies & Parts Manufacturers' Association whose respective offices recently were moved from Detroit to Chicago.

Senior partners of the new firm are Richard M. McClure, Hadar Ortman, and Arthur A. Hadden. Mr. Ortman and Mr. Hadden were formerly associated in consulting work for several years.

Mr. Ortman left the consulting field in 1928 to become director of operations and finance of the Meredith Publishing Co., Des Moines. Later he became president and general manager of W. F. Hall Printing Co., Chicago.

Mr. Hadden was vice president of the Thompson & Lichtner Co., Inc., Boston management engineers, for seven years prior to becoming a partner in the McClure, Hadden & Swisher firm. During the NRA code period, he served as cost consultant to a number of industries through the trade organizations under the management of Mr. McClure, who has headed a trade organization management company with headquarters in Chicago for the past 17 years.

Mr. McClure is executive secretary of the Refrigeration Supplies & Parts Manufacturers' Association. He is a past president of American Trade Association Executives as well as of the Trade Executives' Forum of Chicago.

Samuel R. Bush, staff member of Ortman, McClure, Hadden & Co., is executive secretary of the National Refrigeration Supply Jobbers' Association.

## Inland Begins Eastern Service Plant

DAYTON — Ground has been broken in Clark township, N. J., for the new eastern service plant of the Inland manufacturing division of General Motors Corp.

General contract for construction of the plant has been awarded to Andrew Christensen, Elizabeth, N. J. Work will start immediately. The plant is scheduled to be completed sometime around the first of next year.

The new plant, of single-story construction except for a two-story office building, is located on an 83-acre site three miles south of Crawford, N. J. Floor area will total 117,000 square feet.

Among General Motors executives present at the ground-breaking ceremonies were:

Wallace S. Whittaker, general manager of Inland; James D. Mooney, vice president of G-M in charge of overseas operations; W. C. Williams, Jr., assistant to the director of manufacturing; Daniel C. McGuire, general manager of Argonaut realty division; H. O. K. Meister, general manager of Hyatt bearings division; Fred K. Brun, assistant general manager of G-M's export division.

## Oklahoma Gas & Electric Territory

(Data Furnished by Oklahoma Gas & Electric Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Apartment Houses	59	122.62	66	6.75	58	127.50	183	357.62
Private Homes	2	0.0	1	5.75	0	0.0	3	5.75
Apartment Houses	0	0.0	2	38.75	1	10.0	3	130.25
Banks	2	81.5	1	16.75	4	32.75	7	131.0
Doctors' & Dentists' Offices	1	2.1	10	8.5	0	0.0	11	10.6
Funeral Parlors	2	25.2	1	0.0	0	0.0	3	25.2
Hospital Operating Rooms	2	4.2	0	0.0	1	1.5	3	5.7
Hospital Bedrooms	1	5.72	3	20.5	0	0.0	4	26.22
Offices	19	60.24	37	280.0	20	89.75	76	389.99
Studios, Broadcasting	2	39.71	2	1.25	0	0.0	4	40.96
Utility Company Offices	8	87.55	2	16.25	6	472.25	16	576.05
Barber Shops	1	3.1	1	6.0	0	0.0	2	9.1
Hotel Guest Rooms	0	0.0	0	0.0	2	191.5	2	191.5
Hotel Coffee Shops and Dining Rooms	1	187.5	1	7.0	1	13.0	3	207.5
Office Buildings	2	454.5	7	121.0	1	30.0	10	605.5
Restaurants	6	136.2	7	92.25	4	46.5	17	274.95
Department Stores	2	112.5	1	36.0	1	126.0	4	274.5
Retail Stores	18	148.38	18	373.0	16	249.5	52	771.88
Theaters	3	916.50	0	0.0	1	85.0	4	100.5
Auditoriums	1	13.5	1	50.0	0	0.0	2	63.5
Civic Buildings	0	0.0	1	350.0	0	0.0	1	350.0
Schools	0	0.0	1	7.5	1	18.0	2	25.5
Misc. Commercial	1	3.53	1	1.75	0	0.0	2	5.28
Bakeries	1	11.5	0	0.0	0	0.0	1	11.5
Fur Storage	1	5.2	0	0.0	5	24.25	6	29.45
Misc. Industrial	2	12.55	1	3.5	0	0.0	3	16.05
<b>Total</b>	<b>137</b>	<b>2,436.90</b>	<b>160</b>	<b>1,530.00</b>	<b>122</b>	<b>1,517.50</b>	<b>419</b>	<b>4,484.40</b>

\*Addition to present system.

## Philadelphia

(Data Furnished by Philadelphia Electric Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Residential								
Apartment Houses	7	5.0	6	8.2	2	2.0	15	15.2
Private Homes	64	140.0	27	48.27	13	24.8	104	213.07
Commercial								
Banks	4	435.0	1	6.5	0	0.0	5	441.5
Clubs	1	3.0	1	24.0	0	0.0	2	27.0
Doctors' & Dentists' Offices	10	24.0	3	8.3	4	4.3	17	36.6
Funeral Parlors	7	53.0	4	58.3	4	77.3	15	188.3
Hospital Operating Rooms	1	95.0	0	0.0	2	54.5	3	149.5
Hospital Bedrooms	3	38.0	1	0.75	1	3.0	5	41.75
Hotel Guest Rooms	0	0.0	1	4.0	0	0.0	1	4.0
Offices	56	475.0	47	554.55	19	278.6	112	1,308.15
Studios, Broadcasting	2	107.0	0	0.0	0	8.8	2	115.8
Utility Company Offices	5	261.0	0	0.0	2	144.0	7	405.0
Barber Shops	2	2.0	2	2.75	0	0.0	4	4.75
Beauty Shops	0	0.0	3	53.75	1	45.0	4	98.75
Hotel Dining Rooms	6	193.0	0	0.0	1	93.0	7	286.0
Office Buildings	1	2,625.0	0	0.0	0	0.0	1	2,625.0
Restaurants	41	1,502.0	17	601.3	7	304.8	65	2,407.1
Stores, Department	2	1,768.0	0	0.0	1	2,350.0	3	4,118.0
Stores, Retail	40	1,388.0	29	1,014.85	30	697.2	99	3,100.05
Theaters	38	4,973.0	19	945.8	21	1,356.0	78	7,274.8
Auditoriums	2	563.0	0	0.0	0	0.0	2	563.0
Churches	1	6.0	0	0.0	0	0.0	1	6.0
Libraries & Museums	2	140.0	0	0.0	0	0.0	2	140.0
Schools	28	498.0	2	23.3	12	193.0	42	714.3
Misc. Commercial	4	2,052.0	2	3.0	1	8.0	7	2,063.0
Industrial								
Bakeries	8	304.0	0	65.5	0	0.0	8	369.5
Candy Manufacturing	16	1,238.0	3	92.0	0	400.0	19	1,730.0
Chemists	9	105.0	0	215.0	1	23.0	10	243.0
Leather Manufacturing	2	238.0	0	0.0	0	0.0	2	238.0
Printing & Lithographing	7	271.0	0	0.0	1	180.0	8	451.0
Textile Manufacturing	15	868.0	2	208.0	2	85.0	19	1,141.0
Tobacco Factories	8	1,002.0	2	98.0	0	0.0	10	1,100.0
Dairy Products	0	0.0	1	60.0	1	11.0	2	71.0
Fruit Packing Houses	2	42.0	0	0.0	0	0.0	2	42.0
Fur Storage	2	39.0	1	5.5	0	0.0	3	44.5
Misc. Industrial	14	513.0	2	97.0	8	538.0	24	1,148.0
<b>Total</b>	<b>410</b>	<b>21,966.0</b>	<b>176</b>	<b>4,198.62</b>	<b>134</b>	<b>6,861.3</b>	<b>720</b>	<b>33,025.92</b>

## Washington, D. C.

(Data Furnished by Potomac Electric Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Bakeries .....	4	46.5	0	0.0	0	0.0	4	46.5
Banks .....	1	25.5	1	6.25	0	0.0	2	31.75
Barber & Beauty Shops..	3	24.0	6	47.5	5	26.0	14	97.5
Book Stores .....	0	0.0	0	0.0	1	10.5	1	10.5
Bowling Alleys .....	2	18.0	1	16.5	0	0.0	3	34.5
Candy Mfg. ....	1	3.0	0	0.0	0	0.0	1	3.0
Churches .....	2	109.0	0	0.0	0	0.0	2	109.0
Clubs .....	0	0.0	2	9.5	2	31.5	4	41.0
Department Stores								
(Total & Partial)....	14	1,506.25	4	1,151.25	2	14.0	20	2,671.5
Dress Shops .....	5	57.5	7	128.0	2	31.0	14	216.5
Drug Stores .....	9	205.5	10	132.5	6	50.25	25	388.25
Exhibits & Displays..	6	21.25	0	0.0	0	0.0	6	21.25
5 & 10 Cent Stores..	6	519.0	2	333.5	1	111.5	9	964.0
Food Storage .....	0	0.0	0	0.0	1	68.0	1	68.0
Funeral Parlors .....	2	27.25	1	5.5	2	15.75	5	48.5
Fur Shops .....	5	30.5	0	0.0	0	0.0	5	30.5
Grocery Stores .....	1	3.0	0	0.0	0	0.0	1	3.0
Haberdasheries .....	2	17.5	8	134.5	1	18.0	11	170.0
Hospitals .....	3	161.5	0	0.0	0	0.0	3	161.5
Hotel Dining Rooms and								
Cocktail Rooms .....	17	833.75	2	13.0	2	66.5	21	913.25
Hotel Guest Rooms....	2	159.0	5	1,055.0	3	192.0	10	1,406.0
Interior Decorators ..	0	0.0	1	4.5	0	0.0	1	4.5
Jewelry Stores .....	6	50.25	4	48.5	2	16.0	12	114.75
Leather Goods .....	1	23.5	0	0.0	0	0.0	1	23.5
Libraries .....	1	28.0	0	0.0	0	0.0	1	28.0
Linen Stores .....	1	6.0	0	0.0	0	0.0	1	6.0
Market Spaces .....	3	4.5	0	0.0	0	0.0	3	4.5
Meat Processing .....	1	16.5	0	0.0	0	0.0	1	16.5
Millinery Shops .....	1	8.5	1	8.5	0	0.0	2	17.0
Novelty .....	0	0.0	1	17.0	0	0.0	1	17.0
Office Buildings .....	5	1,717.25	3	584.25	4	136.0	12	2,437.5
Opticians .....	1	2.0	0	0.0	0	0.0	1	2.0
Printing Estab. ....	2	90.0	0	0.0	0	0.0	2	90.0
Private Offices .....	40	154.75	26	105.25	18	152.0	84	412.0
Radio Studios .....	60	136.25	39	37.25	3	4.5	102	178.0
Residences .....	60	136.25	39	37.25	3	4.5	102	178.0
Restaurants .....	43	921.0	22	397.75	16	258.0	81	1,576.75
Schools .....	0	0.0	1	3.0	0	0.0	1	3.0
Shoe Stores .....	14	136.0	7	49.75	4	52.25	25	238.0
Theaters .....	11	2,563.0	8	399.5	7	499.25	26	3,461.75
Wine & Liquor Stores...	1	2.0	0	0.0	0	0.0	1	2.0
Totals .....	278	9,639.75	162	4,688.25	82	1,753.0	522	16,081.0
Federal Government ...	58	19,551.25	6	5,563.0	4	1,260.25	68	26,374.5
Totals .....	336	29,191.0	168	10,251.25	86	3,013.25	590	42,455.5



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## Detroit, Mich.

(Data Furnished by The Detroit Edison Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Offices	67	321.0	46	329.66	29	282.75	142	933.41
Physicians' Offices	0	0.0	4	6.25	3	6.5	7	12.75
Dentists' Offices	0	0.0	1	1.25	2	3.75	3	5.0
Office Buildings	3	1,210.0	1	225.0	1	600.0	5	2,035.0
Banks	3	600.0	2	65.0	1	30.0	6	695.0
Restaurants	27	614.5	10	145.75	9	156.0	46	916.25
Hotels	7	1,042.0	2	30.0	2	182.5	11	1,254.5
Clubs	1	60.0	1	120.0	1	20.0	3	200.0
Residences	48	106.75	106	113.5	87	83.5	241	303.75
Department Stores	6	5,228.0	4	2,160.0	4	285.0	14	7,623.0
Furniture Stores	1	12.0	1	260.0	0	0.0	2	272.0
Confectionery Stores	9	126.5	5	77.5	6	55.5	20	259.5
Ice Cream Stores	0	0.0	1	15.0	3	35.0	4	50.0
Drug Stores	6	72.0	3	37.5	1	15.0	10	124.5
Cigar Stores	1	3.0	0	0.0	3	21.0	4	24.0
Jewelry Stores	6	58.0	3	17.5	3	37.0	12	112.5
Opticians	2	2.0	0	0.0	2	10.0	4	12.0
Linen Store	0	0.0	0	0.0	1	5.0	1	5.0
Clothing Stores	3	23.0	5	54.0	4	148.0	12	225.0
Women's Apparel	11	142.5	6	115.0	6	23.75	23	281.25
Fur Stores	2	35.0	0	0.0	1	15.0	3	50.0
Shoe Stores	4	12.0	4	84.0	5	75.5	13	171.5
Markets	0	0.0	2	25.0	0	0.0	2	25.0
Electric Co. Sales Offices	1	59.0	0	0.0	0	0.0	1	59.0
Radio Stations	2	101.5	2	15.75	0	0.0	4	117.25
Theaters	17	3,715.0	4	195.0	11	880.0	32	4,790.0
Bowling Alleys	0	0.0	2	40.0	1	20.0	3	60.0
Library	1	5.0	0	0.0	0	0.0	1	5.0
Stock Exchange	1	50.0	0	0.0	0	0.0	1	50.0
Stock Brokers	1	75.0	0	0.0	1	25.0	2	100.0
Pawnbrokers	0	0.0	1	2.5	0	0.0	1	2.5
Barber Shops	1	30.0	0	0.0	0	0.0	1	30.0
Beauty Shops	1	5.0	1	7.5	2	20.75	4	33.25
Schools	0	0.0	0	0.0	1	15.0	1	15.0
Hospitals	6	225.83	7	9.5	4	65.0	17	300.33
Undertaking Parlors	5	29.0	4	28.0	0	0.0	9	57.0
Research Laboratory	1	50.0	0	0.0	0	0.0	1	50.0
Engineering Laboratory	1	650.0	0	0.0	0	0.0	1	650.0
Exhibition Building	1	125.0	0	0.0	0	0.0	1	125.0
Recreation Building	0	0.0	0	0.0	1	200.0	1	200.0
Automotive Mfg.	3	670.0	1	3.0	0	0.0	4	673.0
Spark Plug Mfg.	0	0.0	0	0.0	1	15.0	1	15.0
Roller Bearing Mfg.	1	50.0	0	0.0	0	0.0	1	50.0
Tool Mfg.	0	0.0	1	5.0	0	0.0	1	5.0
Instrument Mfg.	0	0.0	0	0.0	1	3.75	1	3.75
Watch Repairs	0	0.0	0	0.0	1	1.0	1	1.0
Refrigerator Mfg.	1	10.0	1	45.0	0	0.0	2	55.0
Rubber Mfg.	2	6.0	0	0.0	0	0.0	2	6.0
Drug Mfg.	5	660.5	0	0.0	1	10.0	6	670.5
Candy Mfg.	4	38.75	0	0.0	0	0.0	4	38.75
Mushroom Growing	1	10.0	0	0.0	0	0.0	1	10.0
Printing & Lithographing	3	26.0	1	0.75	0	0.0	4	26.75
Motion Picture Production	0	0.0	2	15.0	0	0.0	2	15.0
Miscellaneous	0	0.0	0	0.0	2	30.0	2	30.0
<b>Total</b>	<b>269</b>	<b>16,289.83</b>	<b>236</b>	<b>4,248.91</b>	<b>201</b>	<b>3,330.25</b>	<b>706</b>	<b>23,868.99</b>

## New Orleans

(Data Furnished by New Orleans Public Service, Inc.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Airports	1	105.0	0	0.0	0	0.0	1	105.0
Beauty Shops	1	0.5	1	7.75	0	0.0	2	8.25
Broker Rooms	2	15.75	1	48.13	0	0.0	3	63.88
Cake Manufacturers	1	12.0	0	0.0	0	0.0	1	12.0
Candy Manufacturers	2	83.5	0	0.0	0	0.0	2	83.5
Children's Wear	1	4.5	0	0.0	0	0.0	1	4.5
Cigar Manufacturers	2	2.0	0	0.0	0	0.0	2	2.0
Clothing Stores	4	73.0	3	306.0	1	30.0	8	409.0
Colleges	2	4.25	0	0.0	0	0.0	2	4.25
Court Rooms	1	55.0	0	0.0	0	0.0	1	55.0
Department Stores	4	1,813.0	3	449.3	1	210.0	8	2,472.3
Drug Stores	1	1.5	3	83.32	1	10.0	5	94.82
Funeral Homes	1	25.0	1	30.0	0	0.0	2	55.0
General Offices	11	126.35	5	53.5	3	28.25	19	208.1
Hospitals	2	14.5	1	25.0	0	0.0	3	39.5
Hotels	10	621.25	3	111.0	2	55.0	15	787.25
Laboratories	2	43.5	0	0.0	0	0.0	2	43.5
Night Clubs	1	24.0	1	51.0	1	10.75	3	85.75
Office Buildings	3	1,869.0	0	0.0	0	0.0	3	1,869.0
Pecan Dryers	2	1.5	0	0.0	0	0.0	2	1.5
Printing Establishments	2	4.9	0	0.0	0	0.0	2	4.9
Private Offices	16	18.5	22	17.2	27	67.0	65	102.7
Radio Studios	2	26.5	0	0.0	0	0.0	2	26.5
Residences	50	171.78	28	45.29	22	22.0	100	239.07
Restaurants	6	278.16	5	69.84	4	43.0	15	391.0
Seed Storage	1	16.0	0	0.0	0	0.0	1	16.0
Shoe Stores	6	74.5	2	20.75	1	9.0	9	104.25
Stores (5 & 10)	0	0.0	1	117.0	0	0.0	1	117.0
Sugar Storage	1	1.0	0	0.0	0	0.0	1	1.0
Telephone Exchanges	2	6.0	0	0.0	0	0.0	2	6.0
Theaters	4	1,442.0	2	109.0	3	147.5	9	1,698.5
Utilities	1	4.5	0	0.0	0	0.0	1	4.5
Women's Apparel	8	226.0	4	42.5	3	19.0	15	287.5
Railroad Service for Cars	5	380.0	0	0.0	0	0.0	5	380.0
<b>Total</b>	<b>158</b>	<b>7,545.94</b>	<b>86</b>	<b>1,576.88</b>	<b>72</b>	<b>752.25</b>	<b>316</b>	<b>9,875.07</b>

## Chicago

(Data Furnished by Commonwealth Edison Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks	8	1,252	2	328	0	0	10	1,580
Barber Shops	0	0	3	9	1	1	4	10
Beauty Shops	11	107	3	47	5	19	19	173
Brokers & Exchanges	9	772	6	110	1	1	16	883
Churches	4	167	0	0	0	0	4	167
Civic Buildings	1	116	1	150	0	0	2	266
Clubs	4	359	3	87	3	28	10	474
Dance Halls	4	465	0	0	0	0	4	465
Doctors' & Dentists' Offices	15	10	9	6	12	12	36	28
Funeral Homes	21	211	12	131	9	167	42	509
Hospitals	14	90	3	2	1	1	18	93
Hotels	24	3,553	4	64	2	1,037	30	4,654
Industrial								
Bakery	19	304	1	50	1	5	21	359
Candy	28	3,713	11	437	2	63	41	4,213
Printing	24	2,244	2	20	4	48	30	2,712
Miscellaneous	28	1,260	10	240	4	664	42	2,164
General Offices & Bldgs.	86	7,029	58	1,759	40	2,601	184	11,389
Private Offices	166	321	91	115	35	52	292	488
Residences	68	124	48	42	30	63	146	229
Restaurants	139	3,663	66	1,527	82	1,637	287	6,827
Stores								
Candy	16	35	15	73	6	24	37	132
Clothing, Dept.	28	1,849	20	1,179	12	336	60	3,264
Drug	21	294	13	185	14	113	48	592
Food	7	385	4	63	2	8	13	456
Fur	8	34	6	48	5	28	19	110
Shoe	15	128	10	130	21	301	46	559
Miscellaneous	16	1,142	14	867	13	368	43	2,377
Studios	5	419	0	0	2	6	7	425
Theaters	134	18,814	13	1,054	31	1,759	183	21,627
<b>Totals</b>	<b>923</b>	<b>49,890</b>	<b>433</b>	<b>8,723</b>	<b>340</b>	<b>9,742</b>	<b>1,696</b>	<b>67,325</b>

## Reno, Nev.

(Data Compiled by Sierra Pacific Power Co.)

Classification	Prior To 1936		During 1936		First 6 Mos. 1937		Total	
	No.	Hp.	No.	Hp.	No.	Hp.	No.	Hp.
Banks .....	0	0.0	1	15.0	1	20.0	2	35.0
Clubs .....	1	35.0	1	5.0	4	40.0	6	80.0
Millinery Shop .....	0	0.0	0	0.0	1	5.0	1	5.0
Offices .....	0	0.0	0	0.0	2	3.0	2	3.0
Private Homes .....	0	0.0	0	0.0	1	4.0	1	4.0
Retail Stores .....	0	0.0	0	0.0	1	1.0	1	1.0
Restaurants .....	1	5.0	2	8.0	0	0.0	3	13.0
Theaters .....	2	110.0	0	0.0	0	0.0	2	110.0
<b>Total .....</b>	<b>4</b>	<b>150.0</b>	<b>4</b>	<b>28.0</b>	<b>10</b>	<b>73.0</b>	<b>18</b>	<b>251.0</b>